Financial

Accounting

Contents

Accounting and the Business Environment 1

Coffee, Anyone?

Aiden Jackson stared at the list the banker had given him during their meeting. *Business plan, cash flow projections, financial statements, tax returns*. Aiden had visited with the banker because he had a dream of opening a coffee shop near campus. He knew there was a need; students were always looking for a place to study and visit with their friends. He also had the experience. He had worked for the past three years as a manager of a coffee shop in a neighboring town. Aiden needed one thing, though—money. He had saved a small amount of money from his job and received several contributions from family and friends, but he still didn't have enough to open the business. He had decided the best option was to get a loan from his bank. After the meeting, Aiden felt overwhelmed and unsure of the future of his business.

You might think that Aiden was facing an impossible situation, but you'd be wrong. Almost every new business faces a similar situation. The owner starts with an inspiration, and then he or she needs to provide enough continuous cash flow to build the business. In addition, the owner has to make decisions such as: *Should we expand to another location? Do we have enough money to purchase a new coffee roaster? How do I know if the business made a profit?*

So how does Aiden get started? Keep reading. That's what accounting teaches you.

Why Study Accounting?

The situation that Aiden faced is similar to the situations faced in the founding of most businesses. **Starbucks Corporation**, for example, first opened its doors in Seattle, Washington, in 1971. Three partners, Jerry Baldwin, Zev Siegl, and Gordon Bowker, were inspired by a dream of selling high-quality coffee. We know their dream was successful because Starbucks currently has more than 22,000 stores in 67 countries. How did Starbucks grow from a small one-store shop to what it is today? The partners understood accounting—the language of business. They understood how to measure the activities of the business, process that information into reports (financial statements), and then use those reports to make business decisions. Your knowledge of accounting will help you better understand businesses. It will make you a better business owner, employee, or investor.

Chapter 1 Learning Objectives

1 Explain why accounting is important and list the users of accounting information

2 Describe the organizations and rules that govern accounting

3 Describe the accounting equation and define assets, liabilities, and equity

4 Use the accounting equation to analyze transactions

5 Prepare financial statements

6 Use financial statements and return on assets (ROA) to evaluate business performance

WHY IS ACCOUNTING IMPORTANT?

Learning Objective 1
Explain why accounting is important and list the users of accounting information

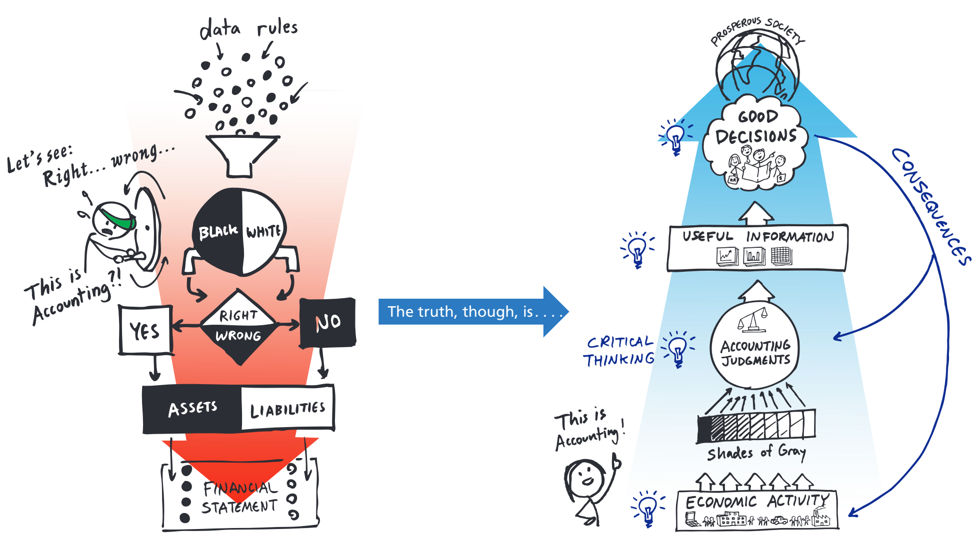
Accounting
The information system that measures business activities, processes the information into reports, and communicates the results to decision makers.

You've heard the term *accounting*, but what exactly is it? **Accounting** is the information system that measures business activities, processes the information into reports, and communicates the results to decision makers. Accounting is the language of business. The better you understand the language of business, the better you can manage your own business, be a valuable employee, or make wise investments.

We tend to think of accountants as boring and dry. However, accounting is much more than simple recordkeeping or bookkeeping. Today's accountants participate in a broad range of activities such as the investigation of financial evidence, the development of computer programs to process accounting information, and the communication of financial results to interested parties. The knowledge of accounting is used every day to help make business decisions.

Recently, leaders from across the accounting community, called the Pathways Commission, came together to create a vision model (see Exhibit 1-1) to help students and

Exhibit 1-1 | **Pathways Vision Model**



We tend to think of accountants as boring and dry.

Accountants are instrumental in helping to create a prosperous society.

This work is by The Pathways Commission. The Pathways Vision Model: AI artwork: AAA Commons. American Accounting Association.

the public understand what accounting is. The model is intended to explain in a visual way what accountants really do. Accounting starts with economic activities that accountants review and evaluate using critical thinking and judgment to create useful information that helps individuals make good decisions. The model emphasizes that good decisions have an impact on accounting judgments and economic activity, thus creating a circular flow of cause and effect. Accountants are more than boring, tedious number crunchers. Instead, accountants play a critical role in supporting a prosperous society.

Decision Makers: The Users of Accounting Information

We can divide accounting into two major fields: financial accounting and managerial accounting. **Financial accounting** provides information for external decision makers, such as outside investors, lenders, customers, and the federal government. **Managerial accounting** focuses on information for internal decision makers, such as the company's managers and employees.

Financial Accounting
The field of accounting that focuses on providing information for external decision makers.

Managerial Accounting
The field of accounting that focuses on providing information for internal decision makers.

Exhibit 1-2 illustrates the difference between financial accounting and managerial accounting. Regardless of whether they are external or internal to the company, all decision makers need information to make the best choices. The bigger the decision, the more information decision makers need. Let's look at some ways in which various people use accounting information to make important decisions.

Accounting is alive! As businesses evolve and the type of business transactions change, so must the language of business. The most significant changes in the business world in the last decade have been the huge increases in international commerce. Because more business is conducted internationally, decision makers are looking for an international accounting language.

Look for more information about International Financial Reporting Standards (IFRS) anywhere that you see this image.

Exhibit 1-2 | **Decision Making: Financial Versus Managerial Accounting**

Financial Accounting	Managerial Accounting
	
External Decision Makers:	**Internal Decision Makers:**
Should I invest in the business? Is the business profitable? Should we lend money to the business? Can the business pay us back?	How much money should the business budget for production? Should the business expand to a new location? How do actual costs compare to budgeted costs?

Individuals

How much cash do you have? How much do you need to save each month to retire at a certain age or pay for your children's college education? Accounting can help you answer questions like these. By using accounting information, you can manage your money, evaluate a new job, and better decide whether you can afford to buy a new computer. Businesses need accounting information to make similar decisions.

Businesses

Business owners use accounting information to set goals, measure progress toward those goals, and make adjustments when needed. The financial statements give owners the information they need to help make those decisions. Financial statements are helpful when, for example, a business owner wants to know whether his or her business has enough cash to purchase another computer.

Investors

Outside investors who have some ownership interest often provide the money to get a business going. Suppose you're considering investing in a business. How would you decide whether it is a good investment? In making this decision, you might try to predict the amount of income you would earn on the investment. Also, after making an investment, investors can use a company's financial statements to analyze how their investment is performing.

You might have the opportunity to invest in the stock market through your company's retirement plan. Which investments should you pick? Understanding a company's financial statements will help you decide. You can view the financial statements of large companies that report to the Securities and Exchange Commission (SEC) by logging on to **http://www.finance.yahoo.com**, **http://www.google.com/finance**, or the SEC's EDGAR database (**http://www.sec.gov/edgar.shtml**).

Creditors

Creditor
Any person or business to whom a business owes money.

Any person or business to whom a business owes money is a **creditor**. Before extending credit to a business, a creditor evaluates the company's ability to make the payments by reviewing its financial statements. Creditors follow the same process when you need to borrow money for a new car or a house. The creditor reviews accounting data to determine your ability to make the loan payments. What does your financial position tell the creditor about your ability to repay the loan? Are you a good risk for the bank?

Taxing Authorities

Local, state, and federal governments levy taxes. Income tax is calculated using accounting information. Good accounting records can help individuals and businesses take advantage of lawful deductions. Without good records, the Internal Revenue Service (IRS) can disallow tax deductions, resulting in a higher tax bill plus interest and penalties.

Accounting Matters

Certified Public Accountants (CPAs)
Licensed professional accountants who serve the general public.

What do businesses such as Amazon.com, Walmart, or even your local sandwich shop across from campus have in common? They all rely upon accounting information to make business decisions. Even if you don't plan on majoring in accounting, the knowledge of accounting helps all businesses plan for the future and evaluate past performance. The skills you learn in this class will help you be a better business professional. Businesses can't function, though, without accountants. That is why a degree in accounting opens so many doors upon graduation. A bachelor's degree in accounting could lead you to several different accounting careers.

What if I want more information about becoming a CPA or CMA?

You've probably heard of a CPA before. **Certified Public Accountants**, or **CPAs**, are licensed professional accountants who serve the general public. CPAs work for public accounting firms, businesses, government entities, or educational institutions. What does it take to be a CPA? Although requirements vary between states, to be certified in a profession, one must meet the educational and/or experience requirements *and* pass a qualifying exam. **The American Institute of Certified Public Accountants (AICPA) Web site (http://www.thiswaytocpa.com) contains a wealth of information about becoming a CPA, career opportunities, and exam requirements.**

Certified Management Accountants (CMAs)
Certified professionals who specialize in accounting and financial management knowledge. They typically work for a single company.

Certified Management Accountants, or **CMAs**, are certified professionals who specialize in accounting and financial management knowledge. Generally, CMAs work for a single company. **You can find information about becoming a CMA, how a CMA differs from a CPA, and why employers are recognizing the CMA certification on the Institute of Management Accountants (IMA) Web site (http://www.imanet.org).** It's worth spending the time and energy for accountants to get certified—certified accountants generally make 10–15% more than their noncertified colleagues when they enter the workforce.

Studying accounting and becoming certified professionally can lead to a financially secure job. According to Robert Half's *2016 Salary Guide*, the top positions in demand that rely on

accounting skills are controllers, financial analysts, tax accountants, auditors, cost accountants, paraprofessional/bookkeeper, and business systems analysts. How much do these types of accountants make? Exhibit 1-3 provides a snapshot of the earning potential for key positions.

Exhibit 1-3 | **Comparison of Accounting Positions**

Position	Job Description	Salary Range
Controllers	Compile financial statements, interact with auditors, and oversee regulatory reporting.	$83,250–$234,750
Financial analysts	Review financial data and help to explain the story behind the numbers.	$48,250–$136,500
Business systems analysts	Use accounting knowledge to create computer systems.	$46,250–$131,000
Tax accountants	Help companies navigate tax laws.	$48,250–$135,250
Auditors	Perform reviews of companies to ensure compliance to rules and regulations.	$48,250–$141,250
Cost accountants	Typically work in a manufacturing business. Help analyze accounting data.	$46,500–$121,500
Paraprofessional/ Bookkeeper	Record financial transactions and help prepare financial records.	$43,250–$63,250

Based on Robert Half's 2016 Salary Guide https://www.roberthalf.com/sites/default/files/Media_Root/images/at-pdfs/robert_half_2016_salary_guide.pdf

Accountants generally work either in public, private, or governmental accounting. Public accounting involves services such as auditing and tax preparation. Well-known public accounting firms include Ernst & Young, Deloitte, PwC, and KPMG. Private accounting involves working for a single company such as Amazon.com, Walmart, or Dell. Other accountants work for the federal or state governments. Wherever accountants work, demand for their services is high. According to the U.S. Bureau of Labor Statistics, employment of accountants and auditors is expected to grow 11% from 2014–2024.

Try It!

Match the accounting terminology to the definitions.

1. Certified management accountants	**a.** information system that measures business activities, processes that information into reports, and communicates the results to decision makers
2. Accounting	**b.** professional accountants who serve the general public
3. Managerial accounting	**c.** person or business to whom a business owes money
4. Certified public accountants	**d.** field of accounting that focuses on providing information for internal decision makers
5. Financial accounting	**e.** professionals who work for a single company
6. Creditor	**f.** field of accounting that focuses on providing information for external decision makers

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S1-1. MyAccountingLab

WHAT ARE THE ORGANIZATIONS AND RULES THAT GOVERN ACCOUNTING?

Learning Objective 2
Describe the organizations and rules that govern accounting

All professions have regulations. Let's look at the organizations and rules that govern the accounting profession.

Governing Organizations

Financial Accounting Standards Board (FASB) The private organization that oversees the creation and governance of accounting standards in the United States.

Securities and Exchange Commission (SEC) U.S. governmental agency that oversees the U.S. financial markets.

In the United States, the **Financial Accounting Standards Board (FASB)**, a privately funded organization, oversees the creation and governance of accounting standards. The FASB works with governmental regulatory agencies like the **Securities and Exchange Commission (SEC)**. The SEC is the U.S. governmental agency that oversees the U.S. financial markets. It also oversees those organizations that set standards (like the FASB). The FASB also works with congressionally created groups like the Public Company Accounting Oversight Board (PCAOB) and private groups like the American Institute of CPAs (AICPA), Institute of Management Accountants (IMA), and International Accounting Standards Board (IASB).

Generally Accepted Accounting Principles

Generally Accepted Accounting Principles (GAAP) Accounting guidelines, currently formulated by the Financial Accounting Standards Board (FASB); the main U.S. accounting rule book.

Faithful Representation Providing information that is complete, neutral, and free from error.

The guidelines for accounting information are called **Generally Accepted Accounting Principles (GAAP)**. GAAP is the main U.S. accounting rule book and is currently created and governed by the FASB. In order to use and prepare financial statements, it's important that we understand GAAP. GAAP rests on a conceptual framework that identifies the objectives, characteristics, elements, and implementation of financial statements and creates the acceptable accounting practices. The primary objective of financial reporting is to provide information useful for making investment and lending decisions. To be useful, information must be relevant and have **faithful representation**.[1] Relevant information allows users of the information to make a decision. Information that is faithfully representative is complete, neutral, and free from error. These basic accounting assumptions and principles are part of the foundation for the financial reports that companies present.

The Economic Entity Assumption

Economic Entity Assumption An organization that stands apart as a separate economic unit.

The most basic concept in accounting is that of the **economic entity assumption**. An economic (business) entity is an organization that stands apart as a separate economic unit. We draw boundaries around each entity to keep its affairs distinct from those of other entities. An entity refers to one business, separate from its owners.

A business can be organized as a sole proprietorship, partnership, corporation, or limited-liability company (LLC). Exhibit 1-4 summarizes the similarities and differences among the four types of business organizations.

Distinguishing Characteristics and Organization of a Corporation

In this book, we spend most of our time studying accounting for corporations. There are several features that distinguish a corporation from other types of business organizations. Let's look at them now.

Separate Legal Entity A corporation is a business entity formed under state law. The state grants a charter (also called *articles of incorporation*), which is the document that gives the state's permission to form a corporation. This is called an *authorization* because the state "authorizes" or approves the establishment of the corporate entity.

[1] This wording was changed from relevant and reliable by the *Statement of Financial Accounting Concepts No. 8*.

Exhibit 1-4 | **Business Organizations**

	Sole Proprietorship	Partnership	Corporation	Limited-Liability Company (LLC)
Definition	A business with a single owner	A business with two or more owners and not organized as a corporation	A business organized under state law that is a separate legal entity	A company in which each member is only liable for his or her own actions
Number of owners	One (called the *proprietor*)	Two or more (called *partners*)	One or more (called *stockholders*)	One or more (called *members* or *partners*)
Life of the organization	Terminates at owner's choice or death	Terminates at a partner's choice or death	Indefinite	Indefinite
Personal liability of the owner(s) for the business's debts	Owner is personally liable	Partners are personally liable	Stockholders are not personally liable	Members are not personally liable
Taxation	Not separate taxable entities. The owner pays tax on the proprietorship's earnings.	Partnership is not taxed. Instead partners pay tax on their share of the earnings.	Separate taxable entity. Corporation pays tax.	LLC is not taxed. Instead members pay tax on their share of earnings.
Type of business	Small businesses	Professional organizations of physicians, attorneys, and accountants	From small business to large multinational businesses	An alternative to the partnership

A corporation is a distinct entity from a legal perspective. It is an entity that exists apart from its owners, who are called the **stockholders** or *shareholders*. However, the corporation has many of the rights that a person has. For example, a corporation may buy, own, and sell property; enter into contracts; sue; and be sued. Items that the business owns (its assets) and those items that the business has to pay later (its liabilities) belong to the corporation and not to the individual stockholders.

The ownership interest of a corporation is divided into shares of stock. A person becomes a stockholder by purchasing the stock of the corporation. The corporate charter specifies how much stock the corporation is authorized to issue (sell) to the public. Due to this fact, it is usually easier for corporations to raise capital.

Sole Proprietorship
A business with a single owner.

Partnership
A business with two or more owners and not organized as a corporation.

Corporation
A business organized under state law that is a separate legal entity.

Limited-Liability Company (LLC)
A company in which each member is only liable for his or her own actions.

Stockholder
A person who owns stock in a corporation.

Continuous Life and Transferability of Ownership Stockholders may transfer stock as they wish—by selling or trading the stock to another person, giving the stock away, bequeathing it in a will, or disposing of the stock in any other way. Because corporations have continuous lives regardless of changes in the ownership of their stock, the transfer of the stock has no effect on the continuity of the corporation. Sole proprietorships and partnerships, in contrast, end when their ownership changes for any reason. A corporation's life is not dependent on a specific individual's ownership.

No Mutual Agency No mutual agency means that the stockholder of a corporation cannot commit the corporation to a contract unless that stockholder is acting in a different role, such as an officer in the business. Mutual agency of the owners is not present in a corporation as it is in a partnership.

Limited Liability of Stockholders A stockholder has limited liability for the corporation's debts. The most that stockholders can lose is the amount they originally paid for the stock. (Depending on state law, this limited liability would also apply to a limited-liability company

member; however, conversely, sole proprietors and partners are personally liable for the debts of their businesses.)

The combination of limited liability and no mutual agency means that persons can invest unlimited amounts in a corporation with only the fear of losing whatever amount the individual has invested if the business fails. This attractive feature enables a corporation to raise more money than proprietorships and partnerships.

Separation of Ownership and Management Stockholders own the business, but a board of directors—elected by the stockholders—appoints corporate officers to manage the business. Thus, stockholders do not have to disrupt their personal affairs to manage the business.

This separation between stockholders (owners of the corporation) and management may create problems. Corporate officers may decide to run the business for their own benefit rather than for the benefit of the company. Stockholders may find it difficult to lodge an effective protest against management because of the distance between them and the top managers.

Corporate Taxation Corporations are separate taxable entities. They pay a variety of taxes not paid by sole proprietorships or partnerships. Depending on the state in which the organization incorporated and the state(s) in which the corporation operates, the taxes could include one or both of the following:

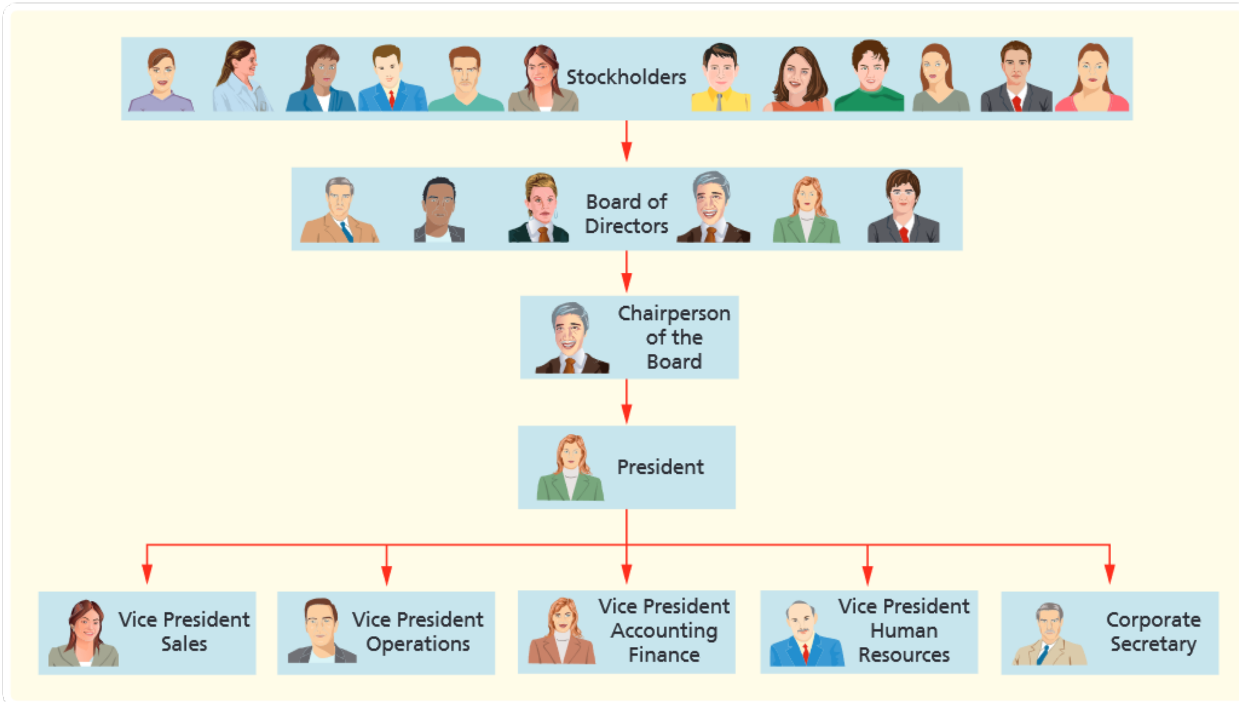
- Federal and state income taxes. Corporate earnings are subject to double taxation. First, corporations pay their own income tax on corporate income. Then, the stockholders pay personal income tax on the dividends that they receive from corporations. This is different from sole proprietorships and partnerships, which pay no business income tax. Instead, the tax falls solely on the individual owners.
- Annual franchise tax levied by the state. The franchise tax is paid to keep the corporation charter in force and enables the corporation to continue in business.

Government Regulation To protect persons who loan money to a corporation or who invest in its stock, states monitor the actions of corporations. Corporations are subjected to more governmental regulation than other forms of business, which is a disadvantage for corporations and can be expensive.

Organization of a Corporation As noted earlier, creation of a corporation begins when its organizers, called the *incorporators*, obtain a charter from the state. The charter includes the authorization for the corporation to issue a certain number of shares of stock, which represent the ownership in the corporation. The incorporators pay fees, sign the charter, and file the required documents with the state. Once the first share of stock is issued, the corporation comes into existence. The incorporators agree to a set of bylaws, which act as the constitution for governing the corporation. Bylaws are the rule book that guides the corporation.

The ultimate control of the corporation rests with the stockholders, who normally receive one vote for each share of stock they own. The stockholders elect the members of the board of directors, which sets policy for the corporation and appoints the officers. The board elects a chairperson, who usually is the most powerful person in the corporation. The board also designates the president, who as chief executive officer manages day-to-day operations. Most corporations also have vice presidents in charge of sales, operations, accounting and finance, and other key areas. Exhibit 1-5 shows the authority structure in a corporation.

Exhibit 1-5 | **Structure of a Corporation**



In order to demonstrate the economic entity assumption and several other concepts in this chapter, we will use a fictitious corporation—Smart Touch Learning—an e-learning business that specializes in providing online courses in accounting, economics, marketing, and management. This fictitious business will be used often throughout the book.

Assume Sheena Bright started the business by organizing it as a corporation. She contributed cash of $30,000 in exchange for stock of $30,000. Following the economic entity assumption, the $30,000 is recorded separately from Sheena's personal assets, such as her clothing and car. To mix the $30,000 of business cash with Sheena's personal assets would make it difficult to measure the success or failure of Smart Touch Learning. The economic entity assumption requires that each entity be separate from other businesses and from the owners.

Cost Principle
A principle that states that acquired assets and services should be recorded at their actual cost.

The Cost Principle

The **cost principle** states that acquired assets and services should be recorded at their actual cost (also called *historical cost*). The cost principle means we record a transaction at the amount shown on the receipt—the actual amount paid. Even though the purchaser may believe the price is a bargain, the item is recorded at the price actually paid and not at the "expected" cost. For example, assume our fictitious company Smart Touch Learning purchased land for $20,000. The business might believe the land is instead worth $25,000. The cost principle requires that Smart Touch Learning record the land at $20,000, not $25,000.

IFRS

Under international reporting standards, the company would be allowed to restate and report the land at $30,000. The ability to report some assets and liabilities at their current fair value each year under international standards is a significant difference from U.S. rules.

The cost principle also holds that the accounting records should continue reporting the historical cost of an asset over its useful life. Why? Because cost is a reliable measure. Suppose Smart Touch Learning holds the land for six months. During that time land prices rise, and the land could be sold for $30,000. Should its accounting value—the figure on the books—be the actual cost of $20,000 or the current market value of $30,000?

According to the cost principle, the accounting value of the land would remain at the actual cost of $20,000.

The Going Concern Assumption

Going Concern Assumption
Assumes that the entity will remain in operation for the foreseeable future.

Another reason for measuring assets at historical cost is the **going concern assumption**. This assumes that the entity will remain in operation for the foreseeable future. Under the going concern assumption, accountants assume that the business will remain in operation long enough to use existing resources for their intended purpose.

The Monetary Unit Assumption

In the United States, we record transactions in dollars because the dollar is the medium of exchange. The value of a dollar changes over time, and a rise in the price level is called *inflation*. During periods of inflation, a dollar will purchase less. But accountants assume that the dollar's purchasing power is stable. This is the basis of the **monetary unit assumption**, which requires that the items on the financial statements be measured in terms of a monetary unit.

Monetary Unit Assumption
The assumption that requires the items on the financial statements to be measured in terms of a monetary unit.

International Financial Reporting Standards

The concepts and principles that we have discussed so far apply to businesses that follow U.S. GAAP and are traded on a U.S. stock exchange, such as the New York Stock Exchange. The SEC requires that U.S. businesses follow U.S. GAAP. Companies who are incorporated in or do significant business in another country might be required to publish financial statements using **International Financial Reporting Standards (IFRS)**, which are published by the **International Accounting Standards Board (IASB)**. IFRS is a set of global accounting standards that are used by more than 116 nations. They are generally less specific and based more on principle than U.S. GAAP. IFRS leaves more room for professional judgment. For example, unlike U.S. GAAP, IFRS allows periodic revaluation of certain assets and liabilities to restate them to market value, rather than keeping them at historical cost. At one point in time it was thought that the SEC would endorse IFRS. However, the SEC has backed away from this strategy and is currently considering whether a single set of global accounting standards is achievable.

International Financial Reporting Standards (IFRS)
A set of global accounting guidelines, formulated by the International Accounting Standards Board (IASB).

International Accounting Standards Board (IASB)
The private organization that oversees the creation and governance of International Financial Reporting Standards (IFRS).

Ethics in Accounting and Business

Ethical considerations affect accounting. Investors and creditors need relevant and faithfully representative information about a company that they are investing in or lending money to. Companies want to be profitable and financially strong to attract investors and attempt to present their financial statements in a manner that portrays the business in the best possible way. Sometimes these two opposing viewpoints can cause conflicts of interest. For example, imagine a company that is facing a potential million-dollar lawsuit due to a defective product. The company might not want to share this information with investors because it would potentially hurt the business's profitability. On the other hand, investors would want to know about the pending lawsuit so that they could make an informed decision about investing in the business. To handle these conflicts of interest and to provide reliable information, the SEC requires publicly held companies to have their financial statements audited by independent accountants. An **audit** is an examination of a company's financial statements and records. The independent accountants then issue an opinion that states whether the financial statements give a fair picture of the company's financial situation.

Audit
An examination of a company's financial statements and records.

The vast majority of accountants do their jobs professionally and ethically, but we often don't hear about them. Unfortunately, only those who cheat make the headlines. In recent years, we have seen many accounting scandals.

In response to the Enron and WorldCom reporting scandals, the U.S. government took swift action. It passed the **Sarbanes-Oxley Act (SOX)**, intended to curb financial scandals. SOX requires management to review internal control and take responsibility for the accuracy and completeness of their financial reports. In addition, SOX made it a criminal offense to falsify financial statements. The Sarbanes-Oxley Act also created a new watchdog agency, the Public Company Accounting Oversight Board (PCAOB), to monitor the work of independent accountants who audit public companies. More recent scandals, such as the Bernie Madoff scandal in which Mr. Madoff pleaded guilty to defrauding thousands of investors by filing falsified trading reports, have further undermined the public's faith in financial reporting. This may result in more legislation that will influence future reporting.

Sarbanes-Oxley Act (SOX)
Requires management to review internal control and take responsibility for the accuracy and completeness of their financial reports.

Try It!

Match the accounting terminology to the definitions.

7. Cost principle	**a.** oversees the creation and governance of accounting standards in the United States
8. GAAP	**b.** requires an organization to be a separate economic unit
9. Faithful representation	**c.** oversees U.S. financial markets
10. SEC	**d.** states that acquired assets and services should be recorded at their actual cost
11. FASB	**e.** creates International Financial Reporting Standards
12. Monetary unit assumption	**f.** the main U.S. accounting rule book
13. Economic entity assumption	**g.** assumes that an entity will remain in operation for the foreseeable future
14. Going concern assumption	**h.** assumes that items on the financial statements are recorded in a monetary unit
15. IASB	**i.** requires information to be complete, neutral, and free from material error

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S1-2 through S1-5. MyAccountingLab

WHAT IS THE ACCOUNTING EQUATION?

Learning Objective 3
Describe the accounting equation and define assets, liabilities, and equity

The basic tool of accounting is the **accounting equation**. It measures the resources of a business (what the business owns or has control of) and the claims to those resources (what the business owes to creditors and to the owners). The accounting equation is made up of three parts—assets, liabilities, and equity—and shows how these three parts are related. Assets appear on the left side of the equation, and the liabilities and equity appear on the right side.

Accounting Equation
The basic tool of accounting, measuring the resources of the business (what the business owns or has control of) and the claims to those resources (what the business owes to creditors and to the owners). Assets = Liabilities + Equity.

Assets = Liabilities + Equity

Remember, the accounting equation is an equation—so the left side of the equation always equals the right side of the equation.

Example: If a business has assets of \$230,000 and liabilities of \$120,000, its equity must be \$110,000 (\$230,000 – \$120,000).

Assets	=	Liabilities	+	Equity
\$230,000	=	\$120,000	+	?
\$230,000	=	\$120,000	+	\$110,000

Assets

Assets
Economic resources that are expected to benefit the business in the future. Something the business owns or has control of.

An **asset** is an economic resource that is expected to benefit the business in the future. Assets are something of value that the business owns or has control of. Cash, Merchandise Inventory, Furniture, and Land are examples of assets.

Liabilities

Liabilities
Debts that are owed to creditors.

Claims to those assets come from two sources: liabilities and equity. **Liabilities** are debts that are owed to creditors. Liabilities are something the business owes and represent the creditors' claims on the business's assets. For example, a creditor who has loaned money to a business has a claim to some of the business's assets until the business pays the debt. Many liabilities have the word *payable* in their titles. Examples include Accounts Payable, Notes Payable, and Salaries Payable.

Equity

Equity
The owners' claims to the assets of the business.

Contributed Capital
Owner contributions to a corporation.

Revenues
Amounts earned from delivering goods or services to customers.

Expenses
The costs of selling goods or services.

Dividend
A distribution of a corporation's earnings to stockholders.

Common Stock
Represents the basic ownership of a corporation.

Retained Earnings
Equity earned by profitable operations of a corporation that is not distributed to stockholders.

The owners of a corporation are referred to as stockholders (also called *shareholders*). The owners' claims to the assets of the business are called **equity** (also called *stockholders' equity*). Equity represents the amount of assets that are left over after the company has paid its liabilities. It is the company's net worth.

Equity increases with owner contributions and revenues. Owner contributions to a corporation are referred to as **contributed capital**. A stockholder can contribute cash or other assets (such as equipment) to the business and receive capital. Equity is also increased by revenues. **Revenues** are earnings that result from delivering goods or services to customers. Examples of revenues are Sales Revenue, Service Revenue, and Rent Revenue.

Equity decreases with expenses and distributions to owners. **Expenses** are the costs of selling goods or services. Expenses are the opposite of revenues and, therefore, decrease equity. Examples of expenses are Rent Expense, Salaries Expense, Advertising Expense, and Utilities Expense.

A profitable corporation may make distributions to stockholders in the form of **dividends**. Dividends can be paid in the form of cash, stock, or other property. Dividends are not expenses. A corporation may or may not make dividend payments to the stockholders. Dividends are the opposite of owner contributions and, therefore, decrease equity.

Equity consists of two main components: contributed capital and retained earnings. Contributed capital (also called *paid-in capital*) is the amount contributed to the corporation by its owners (the stockholders). The basic element of contributed capital is stock, which the corporation issues to the stockholders as evidence of their ownership. **Common stock** represents the basic ownership of every corporation.

Retained earnings is the equity earned by profitable operations that is not distributed to stockholders. There are three types of events that affect retained earnings: dividends, revenues, and expenses. Dividends represent decreases in retained earnings through the distribution of cash, stock, or other property to stockholders. Revenues are increases in retained earnings from delivering goods or services to customers. Revenues are earnings. For example, if Smart Touch Learning provided e-learning services and earned \$5,500 of revenue, the business's retained earnings increased by \$5,500. Expenses are the decreases in

retained earnings that result from operations. For example, Smart Touch Learning paid salaries of $1,200 to its employees, and that is an expense that decreases retained earnings.

The accounting equation can now be expanded to show the components of equity.

ASSETS	=	LIABILITIES +	EQUITY			
			Contributed Capital	+	Retained Earnings	
			Common Stock	− Dividends	+ Revenues	− Expenses

Net Income
The result of operations that occurs when total revenues are greater than total expenses.

Net Loss
The result of operations that occurs when total expenses are greater than total revenues.

Businesses strive for net income. When revenues are greater than expenses, the result of operations is a profit or **net income**. When expenses are greater than revenues, the result is a **net loss**.

Try It!

16. Using the expanded accounting equation, solve for the missing amount.

Assets	$ 71,288
Liabilities	2,260
Common Stock	?
Dividends	14,420
Revenues	53,085
Expenses	28,675

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S1-6 through S1-8. MyAccountingLab

HOW DO YOU ANALYZE A TRANSACTION?

Learning Objective 4
Use the accounting equation to analyze transactions

Accounting is based on actual transactions. A **transaction** is any event that affects the financial position of the business *and* can be measured with faithful representation. Transactions affect what the company has (assets), owes (liabilities), and/or its net worth (equity). Many events affect a company, including economic booms and recessions. Accountants, however, do not record the effects of those events. An accountant records only those events that have dollar amounts that can be measured reliably, such as the purchase of a building, a sale of merchandise, and the payment of rent.

Transaction
An event that affects the financial position of the business and can be measured with faithful representation.

Transaction Analysis for Smart Touch Learning

To illustrate accounting for a business, we'll use Smart Touch Learning, the business introduced earlier. We'll account for the transactions of Smart Touch Learning during November 2018 and show how each transaction affects the accounting equation.

Transaction 1—Stockholder Contribution

Assume Sheena Bright contributes $30,000 cash to Smart Touch Learning, a corporation, in exchange for stock. The e-learning business receives $30,000 cash and issues common stock to Sheena Bright. The effect of this transaction on the accounting equation of the business is as follows:

	ASSETS		LIABILITIES	+	EQUITY
					Contributed Capital
	Cash	=			Common Stock
(1)	+30,000				+30,000

Let's take a close look at the transaction above following these steps:

Step 1: Identify the accounts and the account type. Each transaction must affect at least two accounts but could affect more than two. The two accounts involved in this transaction are *Cash (Asset)* and *Common Stock (Equity)*.

Step 2: Decide if each account increases or decreases. Remember to always view this from the *business's* perspective, not from the stockholders' or customers' perspective. *Cash increases*. The business has more cash than it had before. *Common Stock increases*. The business received a $30,000 contribution and issued stock.

Step 3: Determine if the accounting equation is in balance. For each transaction, the amount on the left side of the equation must equal the amount on the right side. *$30,000 = $30,000*

Transaction 2—Purchase of Land for Cash

The business purchases land for an office location, paying cash of $20,000. This transaction affects the accounting equation of Smart Touch Learning as follows:

	ASSETS				LIABILITIES	+	EQUITY
							Contributed Capital
	Cash	+	Land	=		+	Common Stock
Bal.	$30,000						$30,000
(2)	−20,000		+20,000				
Bal.	$10,000	+	$20,000				$30,000

Let's review the transaction using the steps we learned:

Step 1: Identify the accounts and the account type. The two accounts involved are *Cash (Asset)* and *Land (Asset)*.

Step 2: Decide if each account increases or decreases. *Cash decreases.* The business paid cash and therefore has less cash. *Land increases.* The business now has land.

Step 3: Determine if the accounting equation is in balance. *$10,000 + $20,000 = $30,000*

Transaction 3—Purchase of Office Supplies on Account

Smart Touch Learning buys office supplies on account (credit), agreeing to pay $500 within 30 days. This transaction increases both the assets and the liabilities of the business as follows:

	ASSETS						LIABILITIES	+	EQUITY
									Contributed Capital
	Cash	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock
Bal.	$10,000			+	$20,000				$30,000
(3)			+500				+500		
Bal.	$10,000	+	$500	+	$20,000		$500	+	$30,000

Step 1: Identify the accounts and the account type. The two accounts involved are *Office Supplies (Asset)* and *Accounts Payable (Liability)*. Office Supplies is an asset, not an expense, because the supplies are something of value that the company has. The office supplies aren't used up yet, but will be in the future. The liability created by purchasing "on account" is an **Accounts Payable**, which is a short-term liability that will be paid in the future. A payable is always a liability.

Accounts Payable
A short-term liability that will be paid in the future.

Step 2: Decide if each account increases or decreases. *Office Supplies increases.* The business now has more office supplies than it had before. *Accounts Payable increases.* The business now owes more debt than it did before.

Step 3: Determine if the accounting equation is in balance. *$10,000 + $500 + $20,000 = $500 + $30,000*

Notice how the steps help when analyzing transactions. It's important that, as you are learning, you use the steps to complete the transactions. Moving forward, try writing the steps out yourself before looking at the transaction analysis.

Transaction 4—Earning of Service Revenue for Cash

Smart Touch Learning earns service revenue by providing training services for clients. The business earns $5,500 of revenue and collects this amount in cash. The effect on the accounting equation is an increase in Cash and an increase in Service Revenue as follows:

	ASSETS						LIABILITIES	+	EQUITY		
									Contributed Capital	+	Retained Earnings
	Cash	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock	+	Service Revenue
Bal.	$10,000	+	$500	+	$20,000		$500	+	$30,000		
(4)	+5,500										+5,500
Bal.	$15,500	+	$500	+	$20,000		$500	+	$30,000	+	$5,500

A revenue transaction grows the business, as shown by the increases in assets and equity.

Transaction 5—Earning of Service Revenue on Account

Accounts Receivable The right to receive cash in the future from customers for goods sold or for services performed.

Smart Touch Learning performs a service for clients who do not pay immediately. The business receives the clients' promise to pay $3,000 within one month. This promise is an asset, an **Accounts Receivable**, because the business expects to collect the cash in the future. In accounting, we say that Smart Touch Learning performed this service *on account*. It is in performing the service (doing the work), not collecting the cash, that the company *earns* the revenue. As in Transaction 4, increasing revenue increases equity. Smart Touch Learning records the earning of $3,000 of revenue on account as follows:

	ASSETS					LIABILITIES +	EQUITY	
							Contributed Capital +	Retained Earnings
	Cash	+ Accounts Receivable	+ Office Supplies	+ Land	=	Accounts Payable	+ Common Stock	+ Service Revenue
Bal.	$15,500		+ $500	+ $20,000		$500	+ $30,000	+ $5,500
(5)		+3,000						+3,000
Bal.	$15,500	+ $3,000	+ $500	+ $20,000		$500	+ $30,000	+ $8,500

The term on account can be used to represent either Accounts Receivable or Accounts Payable. If the business will be receiving cash in the future, the company will record an Accounts Receivable. If the business will be paying cash in the future, the company will record an Accounts Payable.

Transaction 6—Payment of Expenses with Cash

The business pays $3,200 in cash expenses: $2,000 for office rent and $1,200 for employee salaries. The effects on the accounting equation are as follows:

	ASSETS					LIABILITIES +	EQUITY			
							Contributed Capital +	Retained Earnings		
	Cash	+ Accounts Receivable	+ Office Supplies	+ Land	=	Accounts Payable	+ Common Stock	+ Service Revenue	− Rent Expense	− Salaries Expense
Bal.	$15,500	+ $3,000	+ $500	+ $20,000		$500	+ $30,000	+ $8,500		
(6)	−3,200								−2,000	−1,200
Bal.	$12,300	+ $3,000	+ $500	+ $20,000		$500	+ $30,000	+ $8,500	− $2,000	− $1,200

Expenses have the opposite effect of revenues. Expenses shrink the business, as shown by the decreased balances of assets and equity. Each expense is recorded separately. We record the cash payment in a single amount for the sum of the expenses: $3,200 ($2,000 + $1,200). Notice that the accounting equation remains in balance ($12,300 + $3,000 + $500 + $20,000 = $500 + $30,000 + $8,500 − $2,000 − $1,200).

Transaction 7—Payment on Account (Accounts Payable)

The business pays $300 to the store from which it purchased office supplies in Transaction 3. In accounting, we say that the business pays $300 *on account*. The effect on

the accounting equation is a decrease in Cash and a decrease in Accounts Payable as shown here:

	ASSETS								LIABILITIES	+	EQUITY						
											Contributed Capital	+	Retained Earnings				
	Cash	+	Accounts Receivable	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock	+	Service Revenue	−	Rent Expense	−	Salaries Expense
Bal.	$12,300	+	$3,000	+	$500	+	$20,000		$500	+	$30,000	+	$8,500	−	$2,000	−	$1,200
(7)	−300								−300								
Bal.	$12,000	+	$3,000	+	$500	+	$20,000		$200	+	$30,000	+	$8,500	−	$2,000	−	$1,200

The payment of cash on account has no effect on the amount of Office Supplies (Asset). Smart Touch Learning has not increased the amount of its office supplies; instead, it is paying off a liability (Accounts Payable decreased $300) with cash (Cash decreased $300). **To record an increase to Office Supplies, in this transaction, would be accounting for the purchase of office supplies twice.** We have already recorded the purchase of office supplies in Transaction 3; in this transaction, we are now ready to record only the payment on account.

Why didn't we record an increase to Office Supplies? We are making a payment for the supplies; wouldn't we increase Office Supplies and decrease Cash?

Transaction 8—Collection on Account (Accounts Receivable)

In Transaction 5, the business performed services for clients on account. Smart Touch Learning now collects $2,000 from a client. We say that Smart Touch Learning collects the cash *on account*. The business will record an increase in the asset Cash. Should it also record an increase in Service Revenue? No, because the business already recorded the revenue when it earned the revenue in Transaction 5. The phrase "collect cash on account" means to record an increase in Cash and a decrease in Accounts Receivable. Accounts Receivable is decreased because the $2,000 that the business was to collect at some point in the future is being collected today. The effect on the accounting equation is as follows:

	ASSETS								LIABILITIES	+	EQUITY						
											Contributed Capital	+	Retained Earnings				
	Cash	+	Accounts Receivable	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock	+	Service Revenue	−	Rent Expense	−	Salaries Expense
Bal.	$12,000	+	$3,000	+	$500	+	$20,000		$200	+	$30,000	+	$8,500	−	$2,000	−	$1,200
(8)	+2,000		−2,000														
Bal.	$14,000	+	$1,000	+	$500	+	$20,000		$200	+	$30,000	+	$8,500	−	$2,000	−	$1,200

Don't I have to put an amount on the left side of the accounting equation and an amount on the right side of the accounting equation for the equation to balance?

This transaction is recorded as an increase in one asset (Cash) and a decrease in another asset (Accounts Receivable). Is the accounting equation still in balance? Yes. **As long as you record an increase and decrease of the same amount on one side of the accounting equation, the accounting equation remains in balance.** In other words, total Assets, Liabilities, and Equity are all unchanged from the preceding total. Why? Because Smart Touch Learning exchanged one asset (Cash) for another (Accounts Receivable), causing a zero effect on the total amount of assets in the accounting equation (+$2,000 − $2,000 = $0).

Transaction 9—Payment of Cash Dividend

Smart Touch Learning distributes a $5,000 cash dividend to the stockholder, Sheena Bright. The effect on the accounting equation is:

	ASSETS				=	LIABILITIES +	EQUITY				
							Contributed Capital +	Retained Earnings			
	Cash	+ Accounts Receivable	+ Office Supplies	+ Land		Accounts Payable	+ Common Stock	− Dividends	+ Service Revenue	− Rent Expense	− Salaries Expense
Bal.	$14,000	+ $1,000	+ $500	+ $20,000		$200	+ $30,000		+ $8,500	− $2,000	− $1,200
(9)	−5,000							−5,000			
Bal.	$ 9,000	+ $1,000	+ $500	+ $20,000		$200	+ $30,000	− $5,000	+ $8,500	− $2,000	− $1,200

The dividend decreases the business's cash and equity. *Dividends do not represent an expense because they are not related to the earning of revenue. Therefore, dividends do not affect the business's net income or net loss.*

A summary of all nine transactions for Smart Touch Learning is presented in Exhibit 1-6.

Exhibit 1-6 | **Analysis of Transactions, Smart Touch Learning**

1. Smart Touch Learning received $30,000 cash and issued common stock to Sheena Bright, stockholder.
2. Paid $20,000 cash for land.
3. Bought $500 of office supplies on account.
4. Received $5,500 cash from clients for service revenue earned.
5. Performed services for clients on account, $3,000.
6. Paid cash expenses: office rent, $2,000; employee salaries, $1,200.
7. Paid $300 on the accounts payable created in Transaction 3.
8. Collected $2,000 on the accounts receivable created in Transaction 5.
9. Paid cash dividends of $5,000 to stockholder, Sheena Bright.

	ASSETS				=	LIABILITIES +	EQUITY				
							Contributed Capital +	Retained Earnings			
	Cash	+ Accounts Receivable	+ Office Supplies	+ Land		Accounts Payable	+ Common Stock	− Dividends	+ Service Revenue	− Rent Expense	− Salaries Expense
(1)	+30,000						+30,000				
(2)	−20,000			+20,000							
Bal.	$10,000			+ $20,000			$30,000				
(3)			+500			+500					
Bal.	$10,000		+ $500	+ $20,000		$500	+ $30,000				
(4)	+5,500								+5,500		
Bal.	$15,500		+ $500	+ $20,000		$500	+ $30,000		+ $5,500		
(5)		+3,000							+3,000		
Bal.	$15,500	+ $3,000	+ $500	+ $20,000		$500	+ $30,000		+ $8,500		
(6)	−3,200									−2,000	−1,200
Bal.	$12,300	+ $3,000	+ $500	+ $20,000		$500	+ $30,000		+ $8,500	− $2,000	− $1,200
(7)	−300					−300					
Bal.	$12,000	+ $3,000	+ $500	+ $20,000		$200	+ $30,000		+ $8,500	− $2,000	− $1,200
(8)	+2,000	−2,000									
Bal.	$14,000	+ $1,000	+ $500	+ $20,000		$200	+ $30,000		+ $8,500	− $2,000	− $1,200
(9)	−5,000							−5,000			
Bal.	$ 9,000	+ $1,000	+ $500	+ $20,000		$200	+ $30,000	− $5,000	+ $8,500	− $2,000	− $1,200
	$30,500					$30,500					

Try It!

17. Using the information provided, analyze the effects of Lawlor Lawn Service's transactions on the accounting equation.

May 1	Received $1,700 and issued common stock.
May 3	Purchased a mower on account, $1,440.
May 5	Performed lawn services for client on account, $200.
May 17	Paid $60 cash for gas used in mower.
May 28	Paid cash dividends of $300.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S1-9 and S1-10. MyAccountingLab

HOW DO YOU PREPARE FINANCIAL STATEMENTS?

Learning Objective 5
Prepare financial statements

We have now recorded Smart Touch Learning's transactions, and they are summarized in Exhibit 1-6. Notice how total assets equal total liabilities plus equity ($30,500 = $30,500).

But a basic question remains: How will people actually use this information? The information in Exhibit 1-6 does not tell a lender whether Smart Touch Learning can pay off a loan. The exhibit does not tell whether the business is profitable.

To address these important questions, we need financial statements. **Financial statements** are business documents that are used to communicate information needed to make business decisions. Four financial statements are prepared. These statements are prepared in the order listed in Exhibit 1-7.

Financial Statements
Business documents that are used to communicate information needed to make business decisions.

Because financial statements are used to communicate information, they always include a heading with important details about the reports. The standard 3-line heading tells the reader of the statement who, what, and when—the name of the business, the title of the report, and the specific date or time period of the report.

Exhibit 1-7 | Financial Statements

Financial Statement	Information Provided and Purpose	How Is It Prepared?
Income statement	Provides information about profitability for a particular period for the company.	Revenues − Expenses = Net Income or Net Loss
Statement of retained earnings	Informs users about how much of the earnings were kept and reinvested in the company.	Retained Earnings, Beginning + Net Income or − Net Loss for the period − Dividends for the period = Retained Earnings, Ending
Balance sheet	Provides valuable information to financial statement users about economic resources the company has (assets) as well as debts the company owes (liabilities). Allows decision makers to determine their opinion about the financial position of the company.	Assets = Liabilities + Stockholders' Equity
Statement of cash flows	Reports on a business's cash receipts and cash payments for a period of time.	Cash flows from operating activities Cash flows from investing activities Cash flows from financing activities

Income Statement

Income Statement
Reports the *net income* or *net loss* of the business for a specific period.

Let's start by reviewing the **income statement**. The income statement (also called the *statement of earnings*) presents a summary of a business entity's revenues and expenses for a period of time, such as a month, quarter, or year. The income statement tells us whether the business enjoyed net income or suffered a net loss. Remember:

- Net income means total revenues are greater than total expenses.
- Net loss means total expenses are greater than total revenues.

It's important to remember that the only two types of accounts that are reported on the income statement are revenues and expenses. Exhibit 1-8 shows the income statement for Smart Touch Learning. Every income statement contains similar information.

Exhibit 1-8 | **Income Statement**

The heading includes the name of the business, the title of the statement, and the time period. An income statement always represents a period of time, for example, a month or year.

SMART TOUCH LEARNING Income Statement Month Ended November 30, 2018		
Revenues:		
Service Revenue		$ 8,500
Expenses:		
Rent Expense	$ 2,000	
Salaries Expense	1,200	
Total Expenses		3,200
Net Income		$ 5,300

The revenue accounts are always listed first and then subtotaled if necessary.

Net income is calculated as total revenues minus total expenses.

Each expense account is listed separately from largest to smallest and then subtotaled if necessary.

Statement of Retained Earnings

Statement of Retained Earnings
Reports how the company's retained earnings balance changed from the beginning to the end of the period.

The next statement prepared is the **statement of retained earnings**. The statement of retained earnings shows the changes in retained earnings for a business entity during a time period, such as a month, quarter, or year.

Review the statement of retained earnings for Smart Touch Learning in Exhibit 1-9. Notice that the net income for the month is the net income that was calculated on the income statement. This is the main reason why the income statement is prepared before the statement of retained earnings. The net income (or net loss) must first be calculated on the income statement and then carried to the statement of retained earnings.

Exhibit 1-9 | **Statement of Retained Earnings**

The heading includes the name of the business, the title of the statement, and the time period. A statement of retained earnings always represents a period of time.

The beginning retained earnings is $0 because Smart Touch Learning began this month; therefore, it had no beginning retained earnings. The beginning retained earnings will always be the ending retained earnings from the previous time period.

SMART TOUCH LEARNING Statement of Retained Earnings Month Ended November 30, 2018	
Retained Earnings, November 1, 2018	$ 0
Net income for the month	5,300
	5,300
Dividends	(5,000)
Retained Earnings, November 30, 2018	$ 300

Net income is transferred from the income statement.

The dividends are subtracted from retained earnings. If there had been a net loss rather than a net income, this would also be subtracted.

Balance Sheet
Reports on the assets, liabilities, and stockholders' equity of the business as of a specific date.

Balance Sheet

The **balance sheet** (also called the *statement of financial position*) lists a business entity's assets, liabilities, and stockholders' equity as of a specific date, usually the end of a month, quarter, or year. **The balance sheet is a snapshot of the entity. An investor or creditor can quickly assess the overall health of a business by viewing the balance sheet.**

Review the balance sheet for Smart Touch Learning in Exhibit 1-10. Every balance sheet is prepared in a similar manner.

What does the balance sheet tell an investor or creditor?

Exhibit 1-10 | **Balance Sheet**

Each asset account is listed separately and then totaled. Cash is always listed first.

The heading again shows the name of the business and the title of the financial statement. Notice that the date is different. The balance sheet shows the date as a specific date, not a period of time.

SMART TOUCH LEARNING Balance Sheet November 30, 2018			
Assets		**Liabilities**	
Cash	$ 9,000	Accounts Payable	$ 200
Accounts Receivable	1,000		
Office Supplies	500	**Stockholders' Equity**	
Land	20,000	Common Stock	30,000
		Retained Earnings	300
		Total Stockholders' Equity	30,300
Total Assets	$ 30,500	Total Liabilities and Stockholders' Equity	$ 30,500

Liabilities are listed separately and then totaled. Liabilities that are to be paid first are listed first.

Retained Earnings is taken directly from the statement of retained earnings.

The balance sheet must always balance.
Assets = Liabilities + Stockholders' Equity

TYING IT ALL TOGETHER

At the beginning of the chapter, we introduced **Starbucks Corporation** as a leading retailer in the specialty coffee market. Starbucks purchases and roasts high-quality coffees and sells other beverages (such as tea). In addition, Starbucks sells a variety of fresh food items including snack offerings.

What type of asset accounts would Starbucks have and what financial statement would those assets be reported on?

Starbucks reports many assets on its balance sheet, including the following: Cash; Account Receivable; Inventories; and Property, Plant, and Equipment.

If Starbucks owed money to a vendor, how would this be reported on its financial statements?

Money owed to a vendor is reported on the balance sheet as Accounts Payable. As of September 27, 2015, Starbucks Corporation reported $684.2 million of Accounts Payable. This represents an increase in debt from the previous year of $533.7 million.

How does Starbucks earn revenue and where would this be reported on its financial statements?

Starbucks reports three main revenue sources on its income statement: revenue received from operating stores owned by the company, revenue received from stores licensed to sell Starbucks products, and revenue from consumer packaged goods such as packaged coffee and other beverages sold at grocery stores. The largest source of revenue for Starbucks comes from its company-operated stores and represents 79% of total revenue.

What type of expenses might Starbucks have and what financial statement would this be reported on?

Starbucks reports its expenses on the income statement. Its largest expense for the year ended September 27, 2015, is Cost of Sales at $7,787.5 million (i.e., the cost to purchase the items it sells). The income statement also includes store operating expenses of $5,411.1 million for costs (such as utilities, salaries, and benefits for employees). Starbucks also reports $522.4 million in other operating expenses for the year ending September 27, 2015. Other operating expenses might include items such as advertising expenses.

When you are preparing the financial statements, start by identifying which account goes on which statement. Each account will only go on one statement, except for Retained Earnings and Cash. For example, Service Revenue is only reported on the income statement. Liabilities, such as Accounts Payable, are only reported on the balance sheet. Cash and Retained Earnings appear on two statements. Cash is reported on the balance sheet and statement of cash flows, and Retained Earnings is reported on the statement of retained earnings and balance sheet.

Statement of Cash Flows

Statement of Cash Flows
Reports on a business's cash receipts and cash payments for a specific period.

Would the purchase of supplies on account be reported on the statement of cash flows?

The **statement of cash flows** reports the cash coming in (positive amounts) and the cash going out (negative amounts) during a period. It only reports transactions that involve cash because it reports the net increase or decrease in *cash* during the period and the ending *cash* balance. **If a transaction does not involve cash, such as the purchase of supplies on account, it will not be reported on the statement of cash flows.**

The statement of cash flows is divided into three distinct sections: operating, investing, and financing. *Operating activities* involve cash receipts for services and cash payments for expenses. *Investing activities* include the purchase and sale of land and equipment for cash. *Financing activities* include cash contributions by stockholders and cash dividends paid to the stockholders.

Take a look at the statement of cash flows for Smart Touch Learning (Exhibit 1-11). Notice the important items that the statement of cash flows contains.

Exhibit 1-11 | **Statement of Cash Flows**

SMART TOUCH LEARNING Statement of Cash Flows Month Ended November 30, 2018		
Cash flows from operating activities:		
Receipts:		
Collections from customers		$ 7,500
Payments:		
To suppliers	$ (2,300)	
To employees	(1,200)	(3,500)
Net cash provided by operating activities		4,000
Cash flows from investing activities:		
Acquisition of land	(20,000)	
Net cash used by investing activities		(20,000)
Cash flows from financing activities:		
Issued common stock	30,000	
Payment of cash dividends	(5,000)	
Net cash provided by financing activities		25,000
Net increase in cash		9,000
Cash balance, November 1, 2018		0
Cash balance, November 30, 2018		$ 9,000

The heading includes the name of the business, the title of the statement, and the time period. A statement of cash flows always represents a period of time.

Each dollar amount is calculated by evaluating the cash column on Exhibit 1-6. For example, collections from customers is calculated by adding the cash received from customers in Transaction 4 ($5,500) plus Transaction 8 ($2,000).

Operating activities involve cash receipts for services provided and cash payments for expenses paid.

Investing activities include the purchase and sale of land and equipment for cash.

Financing activities include issuance of stock to stockholders and payment of cash dividends.

The ending cash balance must match the cash balance on the balance sheet.

Try It!

18. Using the following information, complete the income statement, statement of retained earnings, and balance sheet for DR Painting for the month of March 2018. The business began operations on March 1, 2018.

Accounts Receivable	$ 1,400	Salaries Expense	$ 800
Accounts Payable	1,000	Service Revenue	7,000
Cash	22,300	Office Supplies	1,800
Stock issued during March	40,000	Truck	20,000
Dividends paid during March	1,500	Utilities Expense	200

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S1-11 through S1-15. MyAccountingLab

HOW DO YOU USE FINANCIAL STATEMENTS TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use financial statements and return on assets (ROA) to evaluate business performance

Each of the financial statements provides different information about the company to the users of the financial statements. Review Exhibit 1-7 for the information provided and the purpose of each financial statement.

Kohl's Corporation

In this chapter, we have reviewed the transactions and financial statements of Smart Touch Learning, a fictitious company. Now it's time to apply what we have learned to a real-world company. In each chapter, we will review the financial statements of **Kohl's Corporation** to learn how to apply the concepts presented in the chapter to evaluate its business performance. Kohl's Corporation is a moderately-priced retailer of apparel, footwear, accessories, beauty, and home products with more than 1,100 department stores in 49 states. Kohl's has a merchandise mix that includes both national brands (52% of total sales in 2015) and private and exclusive brands (48% of total sales in 2015). Its private brands include Apt. 9, Croft & Barrow, Jumping Beans, SO, and Sonoma Goods for Life.

Take a moment to review the 2015 financial statements for Kohl's Corporation. Visit http://www.pearsonhighered.com/Horngren for a link to Kohl's Corporations's annual report. Let's start by identifying the financial statements that we've discussed in this chapter. The income statement is presented on page F-4 of the annual report and is called the *Consolidated Statements of Income*. Notice that the income statement calculates net income (revenue minus expenses). Kohl's net income for the year ending January 30, 2016, was $673 (in millions) or $673,000,000.

The balance sheet is presented on page F-3 of the annual report. Can you find assets, liabilities, and equity? As we have learned in this chapter, Kohl's assets of $13,606 million are equal to its liabilities and equity, $13,606 million.

Return on Assets (ROA)

Return on Assets (ROA)

Measures how profitably a company uses its assets. Net income / Average total assets.

One of the many tools that users of financial statements can use to determine how well a company is performing is the company's **return on assets (ROA)**. Return on assets measures how profitably a company uses its assets. Return on assets is calculated by dividing net income by average total assets. Average total assets is calculated by adding the beginning and ending total assets for the time period and then dividing by two.

DECISIONS

How can individuals make decisions about investing in the stock market?

Lori Cummings just inherited $10,000 from her grandmother. She has decided that she will invest the money in the stock market. She is thinking about investing in one of her favorite clothing stores. The problem is she can't decide between Kohl's or Target.

How should Lori decide between the companies? What resources should she use?

Solution

Lori should begin by reviewing the financial statements of each business. She can locate them on the companies' Web sites or on the Securities and Exchange Commission's Web site (**http://www.sec.gov/edgar.shtml**). She should review the income statements and compare net income. Which business was more profitable? She should look at the balance sheets, carefully reviewing each part of the accounting equation. What was the dollar amount of assets? How much debt does the business have? In addition, she could go online and research the individual companies using a Web site such as Yahoo! Finance. These Web sites provide news and information about the company, such as current headlines, key statistics, and industry comparisons.

Lori should also consider diversifying her investment. Diversifying involves investing in more than one company and in a variety of industries and companies of different sizes. Diversification reduces the risk of an investment. Lori should consider investing half of the $10,000 in a company in a different industry, such as her favorite restaurant or food manufacturer.

Return on assets = Net income / Average total assets
Average total assets = (Beginning total assets + Ending total assets) / 2

Let's take a moment to calculate Kohl's return on assets and measure how profitably it uses its assets. On its 2015 income statement, Kohl's reported net income of $673 million. The corporation reported beginning total assets (found on the balance sheet) of $14,333 million and ending total assets of $13,606 million. Kohl's return on assets for 2015 is (all amounts in millions):

Return on assets = $673 / (($14,333 + $13,606) / 2)
= $673 / $13,970*
= 0.0482 = 4.8%*

*rounded

How do we as an investor know if 4.8% is good or bad? We have to compare the return on assets of competing companies such as **Target Corporation**, TJX Companies, Inc., and J.C. Penney Corporation, Inc. What if we told you that Target Corporation's return on assets was 8.3%? Due to Target's higher ROA, we now know that Target has a stronger return on its assets than does Kohl's. What does this mean? It means that Target produces more profit per every dollar of assets than Kohl's does. As you learn more about accounting, you will explore more financial tools that are available to help investors evaluate a company's performance. Only after an investor looks at the big picture of a company will he or she have a good sense of the company's investment potential.

Try It!

19. Using the following information, calculate the return on assets.

Net income for November, 2018	$ 5,000
Total assets, November 1, 2018	76,000
Total assets, November 30, 2018	80,250

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S1-16. MyAccountingLab

REVIEW

> Things You Should Know

1. Why is accounting important?

- Accounting is the language of business.
- Accounting is used by decision makers including individuals, businesses, investors, creditors, and taxing authorities.
- Accounting can be divided into two major fields: financial accounting and managerial accounting.
- Financial accounting is used by external decision makers, and managerial accounting is used by internal decision makers.
- All businesses need accountants. Accountants work in private, public, and governmental jobs.
- Accountants can be licensed as either a certified public accountant (CPA) or certified management accountant (CMA).

2. What are the organizations and rules that govern accounting?

- Generally Accepted Accounting Principles (GAAP) are the rules that govern accounting in the United States.
- The Financial Accounting Standards Board (FASB) is responsible for the creation and governance of accounting standards.
- Economic entity assumption: Requires an organization to be a separate economic unit such as a sole proprietorship, partnership, corporation, or limited-liability company.
- Cost principle: Acquired assets and services should be recorded at their actual cost.
- Going concern assumption: Assumes that an entity will remain in operation for the foreseeable future.
- Monetary unit assumption: Assumes financial transactions are recorded in a monetary unit.

3. What is the accounting equation?

- Assets = Liabilities + Equity
  - Assets: Items the business owns or controls (examples: cash, furniture, land)
  - Liabilities: Items the business owes (examples: accounts payable, notes payable, salaries payable)
  - Equity: Stockholders' claims to the assets through contributed capital and retained earnings (examples: common stock, dividends, revenues, expenses)

4. How do you analyze a transaction?

- A transaction affects the financial position of a business and can be measured with faithful representation.
- Transactions are analyzed using three steps:

  Step 1: Identify the accounts and account type (Asset, Liability, or Equity).

  Step 2: Decide whether each account increases or decreases.

  Step 3: Determine whether the accounting equation is in balance.

5. How do you prepare financial statements?

- Financial statements are prepared in the following order:
  1. Income statement:
     - Reports the net income or net loss of a business for a specific period.
     - Revenues − Expenses = Net Income or Net Loss
  2. Statement of retained earnings:
     - Reports on the changes in retained earnings for a specific period.
     - Beginning Retained Earnings + Net Income (or − Net Loss) − Dividends = Ending Retained Earnings
  3. Balance sheet:
     - Reports on an entity's assets, liabilities, and stockholders' equity as of a specific date.
     - Assets = Liabilities + Stockholders' Equity
  4. Statement of cash flows:
     - Reports on a business's cash receipts and cash payments for a specific period.
     - Includes three sections:
       - Cash flows from operating activities: Involves cash receipts for services and cash payments for expenses.
       - Cash flows from investing activities: Includes the purchase and sale of land and equipment for cash.
       - Cash flows from financing activities: Includes cash contributions by stockholders and cash dividends paid to the stockholders.

6. How do you use financial statements to evaluate business performance?

- Income statement evaluates profitability.
- Statement of retained earnings shows the amount of earnings that were kept and reinvested in the company.
- Balance sheet details the economic resources the company has, the debts the company owes, and the company's net worth.
- Statement of cash flows shows the change in cash.
- Return on assets (ROA) = Net income / Average total assets.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Ron Smith opens an apartment-locator business near a college campus. The company will be named Campus Apartment Locators. During the first month of operations, July 2018, the business completes the following transactions:

a. Receives a $35,000 contribution from Ron Smith and issues common stock to Ron Smith.

b. Purchases $350 of office supplies on account.

c. Pays cash of $30,000 to acquire a lot next to campus.

d. Locates apartments for clients and receives cash of $1,900.

e. Pays $100 on the accounts payable the business created in Transaction (b).

f. Pays cash expenses for office rent, $400, and utilities, $100.

g. Pays cash dividends of $1,200 to stockholders.

Requirements

1. Analyze the preceding transactions in terms of their effects on the accounting equation of Campus Apartment Locators. Use Exhibit 1-6 as a guide. (See Learning Objective 4)
2. Prepare the income statement, statement of retained earnings, balance sheet, and statement of cash flows of the business after recording the transactions. (See Learning Objective 5)
3. Calculate the return on assets (ROA). (See Learning Objective 6)

> Solution

Requirement 1

	ASSETS					=	LIABILITIES	+	EQUITY								
									Contributed Capital	+	Retained Earnings						
	Cash	+	Office Supplies	+	Land		Accounts Payable	+	Common Stock	−	Dividends	+	Service Revenue	−	Rent Expense	−	Utilities Expense
(a)	+35,000								+35,000								
(b)			+350				+350										
Bal.	$35,000	+	$350				$350	+	$35,000								
(c)	−30,000				+30,000												
Bal.	$5,000	+	$350	+	$30,000		$350	+	$35,000								
(d)	+1,900												+1,900				
Bal.	$6,900	+	$350	+	$30,000		$350	+	$35,000			+	$1,900				
(e)	−100						−100										
Bal.	$6,800	+	$350	+	$30,000		$250	+	$35,000			+	$1,900				
(f)	−500														−400		−100
Bal.	$6,300	+	$350	+	$30,000		$250	+	$35,000			+	$1,900	−	$400	−	$100
(g)	−1,200										−1,200						
Bal.	$5,100	+	$350	+	$30,000		$250	+	$35,000	−	$1,200	+	$1,900	−	$400	−	$100
	$35,450						$35,450										

Requirement 2

CAMPUS APARTMENT LOCATORS Income Statement Month Ended July 31, 2018		
Revenues:		
Service Revenue		$ 1,900
Expenses:		
Rent Expense	$ 400	
Utilities Expense	100	
Total Expenses		500
Net Income		$ 1,400

Chapter 1
Accounting and the Business Environment

Review Questions

1. Accounting is the information system that measures business activities, processes the information into reports, and communicates the results to decision makers. Accounting is the language of business.

2. Financial accounting provides information for external decision makers, such as outside investors, lenders, customers, and the federal government. Managerial accounting focuses on information for internal decision makers, such as the company's managers and employees.

3. Individuals use accounting information to help them manage their money, evaluate a new job, and better decide whether they can afford to make a new purchase. Business owners use accounting information to set goals, measure progress toward those goals, and make adjustments when needed. Investors use accounting information to help them decide whether or not a company is a good investment and once they have invested, they use a company's financial statements to analyze how their investment is performing. Creditors use accounting information to decide whether to lend money to a business and to evaluate a company's ability to make the loan payments. Taxing authorities use accounting information to calculate the amount of income tax that a company has to pay.

4. Certified Public Accountants (CPAs) are licensed professional accountants who serve the general public. They work for public accounting firms, businesses, government, or educational institutions. To be certified they must meet educational and/or experience requirements and pass an exam. Certified Management Accountants (CMAs) specialize in accounting and financial management knowledge. They work for a single company.

5. The FASB oversees the creation and governance of accounting standards. They work with governmental regulatory agencies, congressionally created groups, and private groups.

6. The guidelines for accounting information are called GAAP. It is the main U.S. accounting rule book and is currently created and governed by the FASB. Investors and lenders must have information that is relevant and has faithful representation in order to make decisions and GAAP provides the framework for this financial reporting.

7. A sole proprietorship has a single owner, terminates upon the owner's death or choice, the owner has personal liability for the business's debts, and it is not a separate tax entity. A partnership has two or more owners, terminates at partner's choice or death, the partners have personal liability, and it is not a separate tax entity. A corporation is a separate legal entity, has one or more owners, has indefinite life, the stockholders are not personally liable for the business's debts, and it is a separate tax entity. A limited-liability company has one or more members and each is only liable for his or her own actions, has an indefinite life, and is not a separate tax entity.

8. The land should be recorded at $5,000. The cost principle states that assets should be recorded at their historical cost.

9. The going concern assumption assumes that the entity will remain in business for the foreseeable future and long enough to use existing resources for their intended purpose.

10. The faithful representation concept states that accounting information should be complete, neutral, and free from material error.

11. The monetary unit assumption states that items on the financial statements should be measured in terms of a monetary unit.

12. The IASB is the organization that develops and creates IFRS which are a set of global accounting standards that would be used around the world.

13. Assets = Liabilities + Equity. Assets are economic resources that are expected to benefit the business in the future. They are things of value that a business owns or has control of. Liabilities are debts that are owed to creditors. They are one source of claims against assets. Equity is the other source of claims against assets. Equity is the stockholders' claims against assets and is the amount of assets that is left over after the company has paid its liabilities. It represents the net worth of the corporation.

14. Retained earnings increases with revenues. Retained earnings decreases with expenses and dividends.

15. Revenues – Expenses = Net Income. Revenues are earnings resulting from delivering goods or services to customers. Expenses are the cost of selling goods or service.

16. Step 1: Identify the accounts and the account type. Step 2: Decide if each account increases or decreases. Step 3: Determine if the accounting equation is in balance.

17. Income Statement – Shows the difference between an entity's revenues and expenses and reports the net income or net loss for a specific period.
Statement of Retained Earnings – Shows the changes in retained earnings for a specific period including net income (loss) and dividends.
Balance Sheet – Shows the assets, liabilities, and stockholders' equity of the business as of a specific date.
Statement of Cash Flows – Shows a business's cash receipts and cash payments for a specific period.

18. Return on Assets = Net income / Average total assets. ROA measures how profitably a company uses its assets.

Short Exercises

S1-1

a. FA	e. MA
b. FA	f. FA
c. FA	g. MA
d. MA	h. FA

S1-2

The Financial Accounting Standards Board governs the majority of guidelines, called Generally Accepted Accounting Principles (GAAP), that the CPA will use to prepare financial statements for Wholly Shirts.

S1-3

Chloe's needs will best be met by organizing a corporation since a corporation has an unlimited life and is a separate tax entity. In addition, the owners (stockholders) have limited liability. Chloe could also consider a limited liability company (LLC) as an option. A LLC meets two of the three criteria. It has an unlimited life and limited liability for the owner. However, a LLC is not a separate tax entity.

S1-4

Advantages:
1. Easy to organize.
2. Unification of ownership and management.
3. Less government regulation.
4. Owner has more control over business.

Disadvantages:
1. The owner pays taxes on the entity's earnings since it is not a separate tax entity.
2. No continuous life or transferability of ownership.
3. Unlimited liability of owner for business's debts.

S1-5

a**.** The economic entity assumption
b. The cost principle.
c. The monetary unit assumption.
d. The going concern assumption.

S1-6
Requirement 1

Thompson Handyman Services has equity of $9,350.

Assets	=	Liabilities	+	Equity
$18,400	=	$9,050	+	?
$18,400	=	$9,050	+	**$9,350**

Requirement 2

Thompson Handyman Services has liabilities of $17,200.

Assets	=	Liabilities	+	Equity
$18,400 + $4,300	=	?	+	$9,350 – $3,850
$22,700	=	**$17,200**	+	$5,500

S1-7
Requirement 1

ASSETS	=	LIABILITIES	+	EQUITY						
				Contributed Capital	+	Retained Earnings				
			+	Common Stock	–	Dividends	+	Revenues	–	Expenses
$45,800	=	$17,220	+	$27,460	–	$6,500	+	$8,850	–	**?**
$45,800	=	$17,220	+	$27,460	–	$6,500	+	$8,850	–	**$1,230**

Requirement 2

Roland's Overhead Doors reported net income of $7,620. Net Income = Revenues ($8,850) – Expenses ($1,230)

S1-8

a. L	f. E
b. A	g. A
c. E	h. E
d. A	i. A
e. E	j. E

S1-9

a. Increase asset (Cash); Increase equity (Service Revenue)
b. Decrease asset (Cash); Decrease equity (Salaries Expense)
c. Increase asset (Cash); Increase Equity (Common Stock)
d. Increase asset (Accounts Receivable); Increase equity (Service Revenue)
e. Increase liability (Accounts Payable); Decrease equity (Utility Expense)
f. Decrease asset (Cash); Decrease equity (Dividends)

S1-10

a. Increase asset (Cash); Increase equity (Common Stock)
b. Increase asset (Equipment); Increase liability (Accounts Payable)
c. Increase asset (Office Supplies); Decrease asset (Cash)
d. Increase asset (Cash); Increase equity (Service Revenue)
e. Decrease asset (Cash); Decrease equity (Wages Expense)
f. Decrease asset (Cash); Decrease equity (Dividends)
g. Increase asset (Accounts Receivable); Increase equity (Service Revenue)
h. Decrease asset (Cash); Decrease equity (Rent Expense)
i. Increase liability (Accounts Payable); Decrease equity (Utilities Expense)

S1-11

a. B	f. I
b. B, C	g. B
c. B	h. RE
d. B	i. B
e. I	j. I

S1-12

CENTERPIECE ARRANGEMENTS
Income Statement
Year Ended December 31, 2018

Revenue:		
Service Revenue		$ 70,000
Expenses:		
Salaries Expense	$ 46,000	
Rent Expense	16,000	
Insurance Expense	4,500	
Utilities Expense	1,400	
Total Expenses		67,900
Net Income		$ 2,100

S1-13

CENTERPIECE ARRANGEMENTS Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 5,100
Net income for the year	2,100
	7,200
Dividends	(4,800)
Retained Earnings, December 31, 2018	$ 2,400

S1-14

CENTERPIECE ARRANGEMENTS Balance Sheet December 31, 2018			
Assets		Liabilities	
Cash	$ 7,200	Accounts Payable	$ 17,600
Accounts Receivable	8,000		
Office Supplies	1,700	Stockholders' Equity	
Equipment	12,100	Common Stock	9,000
		Retained Earnings	2,400
		Total Stockholders' Equity	11,400
Total Assets	$ 29,000	Total Liabilities and Stockholders' Equity	$ 29,000

S1-15

POLK STREET HOMES Statement of Cash Flows Month Ended July 31, 2018		
Cash flows from operating activities:		
Receipts:		
Collections from customers		$ 25,000
Payments:		
To employees	$ (1,500)	
To suppliers	(2,500)	(4,000)
Net cash provided by operating activities		21,000
Cash flows from investing activities:		
Purchase of equipment	(25,000)	
Net cash used by investing activities		(25,000)
Cash flows from financing activities:		
Issued common stock	13,000	
Payment of cash dividend	(4,000)	
Net cash provided by financing activities		9,000
Net increase in cash		5,000
Cash balance, July 1, 2018		14,000
Cash balance, July 31, 2018		$ 19,000

S1-16

Return on assets	=	Net income / Average total assets
	=	$50,880 / (($362,000 + $486,000) / 2)
	=	$50,880 / $424,000
	=	12%

Exercises

E1-17

a.	E	e.	E
b.	I	f.	I
c.	E	g.	I
d.	E	h.	E

E1-18

1.	d	6.	f
2.	e	7.	b
3.	g	8.	c
4.	a	9.	j
5.	i	10.	h

E1-19

1.	e	7.	d
2.	a	8.	c
3.	i	9.	g
4.	f	10.	h
5.	j	11.	k
6.	b		

E1-20

	Assets	Liabilities	Equity
Hair Styles	**$ 72,000**	$ 36,000	$ 36,000
Style Cuts	90,000	**42,000**	48,000
Your Basket	101,000	68,000	**33,000**

E1-21

	a.	b.	c.
Stockholders' equity, May 31, 2018 ($122,000 – $66,000)	$ 56,000	$ 56,000	$ 56,000
Issuance of common stock	10,000	0	12,500
Net income for the month	**77,000**	**90,000**	**104,500**
	143,000	146,000	173,000
Dividends	0	(3,000)	(30,000)
Stockholders' equity, June 30, 2018 ($287,000 – $144,000)	$ 143,000	$ 143,000	$ 143,000

E1-22
Requirement 1

	Assets	=	Liabilities	+	Equity
Beginning of 2018	$19,000	=	$14,000	+	?
	$19,000	=	$14,000	+	**$5,000**
End of 2018	$12,000	=	$9,000	+	?
	$12,000	=	$9,000	+	**$3,000**

Stockholders' equity decreased in 2018 by $2,000 ($5,000 – $3,000).

Requirement 2

a. Increase through issuance of common stock.
b. Increase through net income.
c. Decrease through dividend payment.
d. Decrease through net loss.

E1-23
Requirement 1

Revenues	–	Expenses	=	Net Income
$30,000	–	$15,000	=	**$15,000**

Requirement 2

Flowing Rivers Spa's equity increased by $15,000 ($29,000 - $14,000) or the amount of the net income.

	Assets	=	Liabilities	+	Equity
Beginning of 2018	$28,000	=	$14,000	+	?
	$28,000	=	$14,000	+	$14,000
Ending of 2018	$43,000	=	$14,000	+	?
	$43,000	=	$14,000	+	$29,000

E1-24
Requirement 1

	Assets	−	Liabilities	=	Equity
Beginning of 2018	$67,000	−	$11,000	=	$56,000
Ending of 2018	$46,000	−	$34,000	=	$12,000

Retained Earnings:

Retained Earnings, Jan. 1, 2018	$ 45,000
Plus: Revenues	205,000
Less: Expenses	**(241,000)**
Less: Dividends	(8,000)
Retained Earnings, Dec. 31, 2018	$ 1,000

Stockholders' Equity:

Common Stock	$ 11,000
Retained Earnings	1,000
Total Stockholders' Equity	$ 12,000

Requirement 2

Felix Company suffered (or reported) a net loss of ($36,000).

Revenue	−	Expenses	=	Net Income (Loss)
$205,000	−	$241,000	=	($36,000)

E1-25

Student responses will vary. Examples include:
a. Cash purchase of office supplies.
b. Cash dividends paid to stockholders.
c. Paid cash on accounts payable.
d. Received cash for services provided.
e. Borrowed cash from the bank.

E1-26

a. Increase asset (Cash); Increase equity (Common Stock)
b. Increase asset (Accounts Receivable); Increase equity (Rental Revenue)
c. Increase asset (Office Furniture); Increase liability (Accounts Payable)
d. Increase asset (Cash); Decrease asset (Accounts Receivable)
e. Decrease asset (Cash); Decrease liability (Accounts Payable)
f. Increase asset (Cash); Increase equity (Rental Revenue)
g. Decrease asset (Cash); Decrease equity (Rent Expense)
h. Decrease asset (Cash); Increase asset (Office Supplies).

E1-27

a. Increase asset (Cash); Increase equity (Common Stock)
b. Increase asset (Land); Decrease asset (Cash)
c. Decrease asset (Cash); Decrease liability (Accounts Payable)
d. Increase asset (Equipment); Increase liability (Notes Payable)
e. Increase asset (Accounts Receivable); Increase equity (Service Revenue)
f. Increase liability (Salaries Payable); Decrease equity (Salaries Expense)
g. Increase asset (Cash); Decrease asset (Accounts Receivable)
h. Increase asset (Cash); Increase liability (Notes Payable)
i. Decrease asset (Cash); Decrease equity (Dividends)
j. Increase liability (Accounts Payable); Decrease equity (Utility Expense)

E1-28

Transaction Descriptions:

1. Issuance of common stock to stockholders
2. Earned revenue on account
3. Purchased equipment on account
4. Collected cash on account
5. Cash purchase of equipment
6. Paid cash on account
7. Earned revenue and received cash
8. Paid cash for salaries

E1-29

	ASSETS					=	LIABILITIES	+	EQUITY										
									Contributed Capital	+	Retained Earnings								
Date	Cash	+	Medical Supplies	+	Land	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Salaries Expense	–	Rent Expense	–	Utilities Expense
July 6	+68,000								+68,000										
Bal.	$68,000					=		+	$68,000										
9	–56,000				+56,000	=													
Bal.	$12,000			+	$56,000	=		+	$68,000										
12		+	+1,500			=	+1,500												
Bal.	$12,000	+	$1,500	+	$56,000	=	$1,500	+	$68,000										
15																			
Bal.	$12,000	+	$1,500	+	$56,000	=	$1,500	+	$68,000										
20	–2,900					=									–1,300		–1,500		–100
Bal.	$9,100	+	$1,500	+	$56,000	=	$1,500	+	$68,000					–	$1,300	–	$1,500	–	$100
31	+13,000					=							+13,000						
Bal.	$22,100	+	$1,500	+	$56,000	=	$1,500	+	$68,000			+	$13,000	–	$1,300	–	$1,500	–	$100
31	–1,050					=	–1,050												
Bal.	$21,050	+	$1,500	+	$56,000	=	$ 450	+	$68,000			+	$13,000	–	$1,300	–	$1,500	–	$100

E1-30
Requirement 1

a. Income statement
b. Statement of retained earnings
c. Balance sheet
d. Statement of cash flows

Requirement 2
Yes, the financial statements should be prepared in the order listed above in Requirement 1.

Requirement 3
Income Statement:

a. The header includes the name of the business, the title of the statement, and the time period. An income statement always represents a period of time, for example, a month or a year.
b. The revenue accounts are always listed first and then subtotaled if necessary.
c. Each expense account is listed separately from largest to smallest and then subtotaled if necessary.
d. Net income is calculated as total revenues minus total expenses.

Statement of Retained Earnings:

a. The header includes the name of the business, the title of the statement, and the time period. A statement of retained earnings always represents a period of time, for example, a month or a year.
b. The beginning retained earnings is listed first and will always be the ending retained earnings from the previous time period.
c. The net income is added to the beginning retained earnings.
d. The dividends are subtracted from retained earnings. If there had been a net loss, this would also be subtracted.

Balance Sheet:

a. The header includes the name of the business and the title of the statement but the date is different. The balance sheet shows the date as a specific date and not a period of time.
b. Each asset account is listed separately and then totaled. Cash is always listed first.
c. Liabilities are listed separately and then totaled. Liabilities that are to be paid first are listed first.
d. The stockholders' equity section includes common stock and ending retained earnings from the statement of retained earnings.
e. The balance sheet must always balance: Assets = Liabilities + Equity.

Statement of Cash Flows:

a. The header includes the name of the business, the title of the statement, and the time period. A statement of cash flows always represents a period of time, for example, a month or a year.
b. Each dollar amount is calculated by evaluating the cash column on the transaction detail.
c. Operating activities involve cash receipts for services provided and cash payments for expenses paid.
d. Investing activities include the purchase and sale of land and equipment for cash.
e. Financing activities include cash from the issuance of common stock and payment of cash dividends.
f. The ending cash balance must match the cash balance on the balance sheet.

E1-31
Requirement 1

WILSON TOWING SERVICE
Income Statement
Month Ended June 30, 2018

Revenue:		
Service Revenue		$ 15,000
Expenses:		
Salaries Expense	$ 2,400	
Rent Expense	900	
Total Expenses		3,300
Net Income		$ 11,700

Requirement 2

The income statement reports revenues and expenses for a period of time.

E1-32
Requirement 1

WILSON TOWING SERVICE
Statement of Retained Earnings
Month Ended June 30, 2018

Retained Earnings, June 1, 2018	$	3,250
Net income for the month		11,700
		14,950
Dividends		(3,500)
Retained Earnings, June 30, 2018	$	11,450

Requirement 2

The statement of retained earnings reports the changes in retained earnings for a corporation during a time period. The statement of retained earnings reports a corporation's net income or net loss and dividends declared.

E1-33
Requirement 1

WILSON TOWING SERVICE
Balance Sheet
June 30, 2018

Assets		Liabilities	
Cash	$ 1,400	Accounts Payable	$ 8,000
Accounts Receivable	9,000	Notes Payable	6,800
Office Supplies	1,000	Total Liabilities	14,800
Equipment	25,850	Stockholders' Equity	
		Common Stock	11,000
		Retained Earnings	11,450
		Total Stockholders' Equity	22,450
Total Assets	$ 37,250	Total Liabilities and Stockholders' Equity	$ 37,250

Requirement 2

The balance sheet reports an entity's assets, liabilities, and stockholders' equity as of a specific date.

E1-34

DAMON DESIGN STUDIO
Income Statement
Year Ended December 31, 2018

Revenue:		
Service Revenue		$ 154,600
Expenses:		
Salaries Expense	$ 65,000	
Rent Expense	23,000	
Utilities Expense	7,200	
Miscellaneous Expense	3,800	
Property Tax Expense	2,200	
Total Expenses		101,200
Net Income		$ 53,400

E1-35

DAMON DESIGN STUDIO
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 39,000
Net income for the year	53,400
	92,400
Dividends	(57,000)
Retained Earnings, December 31, 2018	$ 35,400

E1-36

DAMON DESIGN STUDIO
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 3,200	Accounts Payable	$ 3,600
Accounts Receivable	9,300	Notes Payable	14,000
Office Supplies	5,100	Total Liabilities	17,600
Office Furniture	48,400	Stockholders' Equity	
		Common Stock	13,000
		Retained Earnings	35,400
		Total Stockholders' Equity	48,400
Total Assets	$ 66,000	Total Liabilities and Stockholders' Equity	$ 66,000

E1-37

a. F +	f. I –
b. O –	g. O –
c. X	h. X
d. F –	i. O –
e. O +	j. X

E1-38

MORNING BEAN FOOD EQUIPMENT COMPANY Statement of Cash Flows Month Ended January 31, 2018		
Cash flows from operating activities:		
Receipts:		
Collections from customers		$ 8,500
Payments:		
To employees	$ (1,300)	
To suppliers	(2,050)	(3,350)
Net cash provided by operating activities		5,150
Cash flows from investing activities:		
Purchase of land	(19,000)	
Net cash used by investing activities		(19,000)
Cash flows from financing activities:		
Issuance of common stock	5,000	
Payment of cash dividends	(500)	
Net cash provided by financing activities		4,500
Net decrease in cash		(9,350)
Cash balance, January 1, 2018		11,800
Cash balance, January 31, 2018		$ 2,450

E1-39

Average total assets = (Beginning total assets + ending total assets) / 2
Beginning total assets = $34,000 + $23,000 + $160,000 + $2,200 + $24,000 + $4,800 = $248,000
Ending total assets = $134,200 + $44,000 + $160,000 + $19,800 + $42,000 + $2,000 = $402,000
Average total assets = ($248,000 + $402,000) / 2 = $325,000

ROA = Net income / Average total assets
ROA = $58,500 / $325,000 = 0.18 = 18%

Problems (Group A)

P1-40A

			ASSETS					=	LIABILITIES	+					EQUITY				
											Contributed Capital	+			Retained Earnings				
	Cash	+	Accounts Receivable	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Rent Expense	–	Advertising Expense
Bal.	$1,900	+	$3,200			+	$15,000	=	$5,000	+	$11,900				+ $3,200				
(a)	+17,000										+17,000								
Bal.	$18,900	+	$3,200			+	$15,000	=	$5,000	+	$28,900				$3,200				
(b)	+800														+800				
Bal.	$19,700	+	$3,200			+	$15,000	=	$5,000	+	$28,900				$4,000				
(c)	–5,000								–5,000										
Bal.	$14,700	+	$3,200			+	$15,000	=	$0	+	$28,900			+	$4,000				
(d)					+1,200				+1,200										
Bal.	$14,700	+	$3,200	+	$1,200	+	$15,000	=	$1,200	+	$28,900			+	$4,000				
(e)	+2,000		–2,000																
Bal.	$16,700	+	$1,200	+	$1,200	+	$15,000	=	$1,200	+	$28,900			+	$4,000				
(f)	–1,600												–1,600						
Bal.	$15,100	+	$1,200	+	$1,200	+	$15,000	=	$1,200	+	$28,900	–	$1,600	+	$4,000				
(g)			+4,500												+4,500				
Bal.	$15,100	+	$5,700	+	$1,200	+	$15,000	=	$1,200	+	$28,900	–	$1,600	+	$8,500				
(h)	–1,500																–1,000		–500
Bal.	$13,600	+	$5,700	+	$1,200	+	$15,000	=	$1,200	+	$28,900	–	$1,600	+	$8,500	–	$1,000	–	$500

P1-41A

	ASSETS					=	LIABILITIES	+	EQUITY												
									Contributed Capital	+	Retained Earnings										
	Cash	+	Accounts Receivable	+	Office Supplies	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Rent Expense	–	Utilities Expense	–	Wages Expense	–	Advertising Expense
1	+19,000								+19,000												
2	+3,800												+3,800								
Bal.	$22,800					=		+	$19,000			+	$3,800								
5	–200				+200																
Bal.	$22,600			+	$200	=		+	$19,000			+	$3,800								
9			+4,500										+4,500								
Bal.	$22,600	+	$4,500	+	$200	=		+	$19,000			+	$8,300								
10							+200										–200				
Bal.	$22,600	+	$4,500	+	$200	=	$200	+	$19,000			+	$8,300			–	$200				
15	–250																				–250
Bal.	$22,350	+	$4,500	+	$200	=	$200	+	$19,000			+	$8,300			–	$200			–	$250
20	–200						–200														
Bal.	$22,150	+	$4,500	+	$200	=	$ 0	+	$19,000			+	$8,300			–	$200			–	$250
25	+4,500		–4,500																		
Bal.	$26,650	+	$ 0	+	$200	=		+	$19,000			+	$8,300			–	$200			–	$250
28	–1,600														–1,600						
Bal.	$25,050			+	$200	=		+	$19,000			+	$8,300	–	$1,600	–	$200			–	$250
28	–1,450																		–1,450		
Bal.	$23,600			+	$200	=		+	$19,000			+	$8,300	–	$1,600	–	$200	–	$1,450	–	$250
30	+1,400												+1,400								
Bal.	$25,000			+	$200	=		+	$19,000			+	$9,700	–	$1,600	–	$200	–	$1,450	–	$250
31	–3,500										–3,500										
Bal.	$21,500	+	$ 0	+	$200	=	$ 0	+	$19,000	–	$3,500	+	$9,700	–	$1,600	–	$200	–	$1,450	–	$250

P1-42A

Requirement 1

HOMETOWN DÉCOR COMPANY
Income Statement
Year Ended December 31, 2018

Revenue:		
Service Revenue		$ 225,000
Expenses:		
Salaries Expense	$ 67,000	
Advertising Expense	17,000	
Rent Expense	14,000	
Interest Expense	6,800	
Property Tax Expense	2,800	
Insurance Expense	1,700	
Total Expenses		109,300
Net Income		$ 115,700

Requirement 2

HOMETOWN DÉCOR COMPANY
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, December 31, 2017	$ 56,000
Net income for the year	115,700
	171,700
Dividends	(36,000)
Retained Earnings, December 31, 2018	$ 135,700

P1-42A, cont.
Requirement 3

HOMETOWN DÉCOR COMPANY
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 2,800	Accounts Payable	$ 14,000
Accounts Receivable	800	Notes Payable	33,000
Office Supplies	8,000	Salaries Payable	1,300
Land	13,000	Total Liabilities	48,300
Building	170,400		
Equipment	17,000	Stockholders’ Equity	
		Common Stock	28,000
		Retained Earnings	135,700
		Total Stockholders’ Equity	163,700
Total Assets	$ 212,000	Total Liabilities and Stockholders’ Equity	$ 212,000

P1-43A

Part a.

PICTURE PERFECT PHOTOGRAPHY
Income Statement
Year Ended December 31, 2018

Revenue:		
Service Revenue		$ 75,000
Expenses:		
Salaries Expense	$ 25,000	
Insurance Expense	6,000	
Advertising Expense	4,000	
Total Expenses		35,000
Net Income		$ 40,000

Part b.

PICTURE PERFECT PHOTOGRAPHY
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, December 31, 2017	$ 16,000
Net income for the year	40,000
	56,000
Dividends	(8,000)
Retained Earnings, December 31, 2018	$ 48,000

Part c.

PICTURE PERFECT PHOTOGRAPHY
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 42,000	Accounts Payable	$ 11,000
Accounts Receivable	13,000	Notes Payable	14,000
Equipment	46,000	Total Liabilities	25,000
		Stockholders' Equity	
		Common Stock	28,000
		Retained Earnings	48,000
		Total Stockholders' Equity	76,000
Total Assets	$101,000	Total Liabilities and Stockholders' Equity	$101,000

P1-44A

OUTDOOR LIFE LANDSCAPING
Balance Sheet
November 30, 2018

Assets		Liabilities	
Cash	$ 4,600	Accounts Payable	$ 2,700
Accounts Receivable	2,000	Notes Payable	24,600
Office Supplies	600	Total Liabilities	27,300
Land	34,100	Stockholders' Equity	
Office Furniture	5,800	Common Stock	8,000
		Retained Earnings	11,800
		Total Stockholders' Equity	19,800
Total assets	$ 47,100	Total Liabilities and Stockholders' Equity	$ 47,100

P1-45A
Requirement 1

	ASSETS							=	LIABILITIES	+	EQUITY								
											Contributed Capital	+	Retained Earnings						
	Cash	+	Accounts Receivable	+	Office Supplies	+	Furniture	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Rent Expense	–	Utilities Expense
5	+75,000										+75,000								
6	–300				+300														
Bal.	$74,700			+	$300			=		+	$75,000								
7							+9,500		+9,500										
Bal.	$74,700			+	$300	+	$9,500	=	$9,500	+	$75,000								
10	+4,000														+4,000				
Bal.	$78,700			+	$300	+	$9,500	=	$9,500	+	$75,000			+	$4,000				
11	–190																		–190
Bal.	$78,510			+	$300	+	$9,500	=	$9,500	+	$75,000			+	$4,000			–	$190
12			+20,000												+20,000				
Bal.	$78,510	+	$20,000	+	$300	+	$9,500	=	$9,500	+	$75,000			+	$24,000			–	$190
18	–750																–750		
Bal.	$77,760	+	$20,000	+	$300	+	$9,500	=	$9,500	+	$75,000			+	$24,000	–	$750	–	$190
25	+20,000		–20,000																
Bal.	$97,760		$ 0	+	$300	+	$9,500	=	$9,500	+	$75,000			+	$24,000	–	$750	–	$190
27	–9,500								–9,500										
Bal.	$88,260			+	$300	+	$9,500	=	$ 0	+	$75,000			+	$24,000	–	$750	–	$190
30	–3,500												–3,500						
Bal.	$84,760	+	$ 0	+	$300	+	$9,500	=	$ 0	+	$75,000	–	$3,500	+	$24,000	–	$750	–	$190

P1-45A, cont.

Requirement 2a

ALLEN SHONTON, CPA
Income Statement
Month Ended April 30, 2018

Revenue:		
Service Revenue		$ 24,000
Expenses:		
Rent Expense	$ 750	
Utilities Expense	190	
Total Expenses		940
Net Income		$ 23,060

Requirement 2b

ALLEN SHONTON, CPA
Statement of Retained Earnings
Month Ended April 30, 2018

Retained Earnings, April 1, 2018	$ 0
Net income for the month	23,060
	23,060
Dividends	(3,500)
Retained Earnings, April 30, 2018	$ 19,560

Requirement 2c

ALLEN SHONTON, CPA
Balance Sheet
April 30, 2018

Assets		Liabilities	
Cash	$ 84,760		
Office Supplies	300		
Furniture	9,500	Stockholders' Equity	
		Common Stock	$ 75,000
		Retained Earnings	19,560
		Total Stockholders' Equity	94,560
Total Assets	$ 94,560	Total Liabilities and Stockholders' Equity	$ 94,560

P1-46A
Requirement 1

	ASSETS							=	LIABILITIES	+	EQUITY								
											Contributed Capital	+	Retained Earnings						
	Cash	+	Accounts Receivable	+	Office Supplies	+	Computer	=	Accounts Payable	+	Common Stock	−	Dividends	+	Service Revenue	–	Utilities Expense	–	Miscellaneous Expense
3	+73,000										+73,000								
5	–700				+700														
Bal.	$72,300			+	$700			=		+	$73,000								
7							+5,000		+5,000										
Bal.	$72,300			+	$700	+	$5,000	=	$5,000	+	$73,000								
9	+2,800														+2,800				
Bal.	$75,100			+	$700	+	$5,000	=	$5,000	+	$73,000			+	$2,800				
15									+400										–400
Bal.	$75,100			+	$700	+	$5,000	=	$5,400	+	$73,000			+	$2,800	–		–	$400
23			+10,000												+10,000				
Bal.	$75,100	+	$10,000	+	$700	+	$5,000	=	$5,400	+	$73,000			+	$12,800	–		–	$400
28	–400								–400										
Bal.	$74,700	+	$10,000	+	$700	+	$5,000	=	$5,000	+	$73,000			+	$12,800	–		–	$400
30	–1,200																–1,200		
Bal.	$73,500	+	$10,000	+	$700	+	$5,000	=	$5,000	+	$73,000			+	$12,800	–	$1,200	–	$400
31	+3,300		–3,300																
Bal.	$76,800	+	$6,700	+	$700	+	$5,000	=	$5,000	+	$73,000			+	$12,800	–	$1,200	–	$400
31	–5,500												–5,500						
Bal.	$71,300	+	$6,700	+	$700	+	$5,000	=	$5,000	+	$73,000	–	$5,500	+	$12,800	–	$1,200	–	$400

P1-46A, cont.
Requirement 2a

ANNETTE PACHELO, ATTORNEY
Income Statement
Month Ended March 31, 2018

Revenue:		
Service Revenue		$ 12,800
Expenses:		
Utilities Expense	$ 1,200	
Miscellaneous Expense	400	
Total Expenses		1,600
Net Income		$ 11,200

Requirement 2b

ANNETTE PACHELO, ATTORNEY
Statement of Retained Earnings
Month Ended March 31, 2018

Retained Earnings, March 1, 2018	$ 0
Net income for the month	11,200
	11,200
Dividends	(5,500)
Retained Earnings, March 31, 2018	$ 5,700

Requirement 2c

ANNETTE PACHELO, ATTORNEY
Balance Sheet
March 31, 2018

Assets		Liabilities	
Cash	$ 71,300	Accounts Payable	$ 5,000
Accounts Receivable	6,700		
Office Supplies	700	Stockholders' Equity	
Computer	5,000	Common Stock	73,000
		Retained Earnings	5,700
		Total Stockholders' Equity	78,700
Total Assets	$ 83,700	Total Liabilities and Stockholders' Equity	$ 83,700

P1-46A, cont.
Requirement 2d

ANNETTE PACHELO, ATTORNEY
Statement of Cash Flows
Month Ended March 31, 2018

Cash flows from operating activities:		
Receipts:		
Collections from customers		$ 6,100
Payments:		
To suppliers		(2,300)
Net cash provided by operating activities		3,800
Cash flows from investing activities:		0
Cash flows from financing activities		
Issued common stock	$ 73,000	
Payment of cash dividends	(5,500)	
Net cash provided by financing activities		67,500
Net increase in cash		71,300
Cash balance, March 1, 2018		0
Cash balance, March 31, 2018		$ 71,300

Problems Group B

P1-47B

	ASSETS							=	LIABILITIES	+	EQUITY								
											Contributed Capital	+	Retained Earnings						
	Cash	+	Accounts Receivable	+	Office Supplies	+	Land	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Rent Expense	–	Advertising Expense
Bal.	$2,600	+	$2,500	+		+	$16,000	=	$5,000	+	$13,600			+	2,500				
(a)	+14,000										+14,000								
Bal.	$16,600	+	$2,500			+	$16,000	=	$5,000	+	$27,600			+	2,500				
(b)	+1,600														+1,600				
Bal.	$18,200	+	$2,500			+	$16,000	=	$5,000	+	$27,600			+	$4,100				
(c)	–5,000								–5,000										
Bal.	$13,200	+	$2,500			+	$16,000	=	$0	+	$27,600			+	$4,100				
(d)					+1,200				+1,200										
Bal.	$13,200	+	$2,500	+	$1,200	+	$16,000	=	$1,200	+	$27,600			+	$4,100				
(e)	+2,300		–2,300																
Bal.	$15,500	+	$200	+	$1,200	+	$16,000	=	$1,200	+	$27,600			+	$4,100				
(f)	–1,500												–1,500						
Bal.	$14,000	+	$200	+	$1,200	+	$16,000	=	$1,200	+	$27,600	–	$1,500	+	$4,100				
(g)			+4,000												+4,000				
Bal.	$14,000	+	$4,200	+	$1,200	+	$16,000	=	$1,200	+	$27,600	–	$1,500	+	$8,100				
(h)	–1,350																–900		–450
Bal.	$12,650	+	$4,200	+	$1,200	+	$16,000	=	$1,200	+	$27,600	–	$1,500	+	$8,100	–	$900	–	$450

P1-48B

	ASSETS					=	LIABILITIES	+	EQUITY												
									Contributed Capital	+	Retained Earnings										
	Cash	+	Accounts Receivable	+	Office Supplies	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Rent Expense	–	Utilities Expense	–	Wages Expense	–	Advertising Expense
1	+19,000								+19,000												
2	+3,800												+3,800								
Bal.	$22,800					=		+	$19,000			+	$3,800								
5	–300				+300																
Bal.	$22,500			+	$300	=		+	$19,000			+	$3,800								
9			+4,500										+4,500								
Bal.	$22,500	+	$4,500	+	$300	=		+	$19,000			+	$8,300								
10							+150										–150				
Bal.	$22,500	+	$4,500	+	$300	=	$150	+	$19,000			+	$8,300			–	$150				
15	–350																				–350
Bal.	$22,150	+	$4,500	+	$300	=	$150	+	$19,000			+	$8,300			–	$150			–	$350
20	–150						–150														
Bal.	$22,000	+	$4,500	+	$300	=	$ 0	+	$19,000			+	$8,300			–	$150			–	$350
25	+4,500		–4,500																		
Bal.	$26,500	+	$ 0	+	$300	=		+	$19,000			+	$8,300			–	$150			–	$350
28	–2,600														–2,600						
Bal.	$23,900			+	$300	=		+	$19,000			+	$8,300	–	$2,600	–	$150			–	$350
28	–1,200																		–1,200		
Bal.	$22,700			+	$300	=		+	$19,000			+	$8,300	–	$2,600	–	$150	–	$1,200	–	$350
30	+1,600												+1,600								
Bal.	$24,300			+	$300	=		+	$19,000			+	$9,900	–	$2,600	–	$150	–	$1,200	–	$350
31	–3,000										–3,000										
Bal.	$21,300	+	$ 0	+	$300	=	$ 0	+	$19,000	–	$3,000	+	$9,900	–	$2,600	–	$150	–	$1,200	–	$350

P1-49B

Requirement 1

PEMBROKE BOOKKEEPING COMPANY
Income Statement
Year Ended December 31, 2018

Revenues:		
Service Revenue		$ 192,000
Expenses:		
Salaries Expense	$ 64,000	
Advertising Expense	12,000	
Rent Expense	7,000	
Interest Expense	6,600	
Property Tax Expense	3,100	
Insurance Expense	1,700	
Total Expenses		94,400
Net Income		$ 97,600

Requirement 2

PEMBROKE BOOKKEEPING COMPANY
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, December 31, 2017	$ 51,000
Net income for the year	97,600
	148,600
Dividends	(28,000)
Retained Earnings, December 31, 2018	$ 120,600

Requirement 3

PEMBROKE BOOKKEEPING COMPANY
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 2,800	Accounts Payable	$ 7,000
Accounts Receivable	1,200	Notes Payable	31,000
Office Supplies	12,000	Salaries Payable	800
Land	10,000	Total Liabilities	38,800
Building	147,400	Stockholders' Equity	
Equipment	15,000	Common Stock	29,000
		Retained Earnings	120,600
		Total Stockholders' Equity	149,600
Total Assets	$ 188,400	Total Liabilities and Stockholders' Equity	$ 188,400

P1-50B
Requirement a

PRETTY PICTURES Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 115,000
Expenses:		
Salaries Expense	$ 30,000	
Insurance Expense	6,000	
Advertising Expense	4,500	
Total Expenses		40,500
Net Income		$ 74,500

Requirement b

PRETTY PICTURES Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, December 31, 2017	$ 20,000
Net income for the year	74,500
	94,500
Dividends	(13,000)
Retained Earnings, December 31, 2018	$ 81,500

Requirement c

PRETTY PICTURES
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 42,000	Accounts Payable	$ 13,000
Accounts Receivable	5,000	Notes Payable	10,000
Equipment	85,500	Total Liabilities	23,000
		Stockholders' Equity	
		Common Stock	28,000
		Retained Earnings	81,500
		Total Stockholders' Equity	109,500
Total Assets	$ 132,500	Total Liabilities And Stockholders' Equity	$ 132,500

P1-51B

JUNIPER LANDSCAPING
Balance Sheet
July 31, 2018

Assets		Liabilities	
Cash	$ 5,300	Accounts Payable	$ 2,700
Accounts Receivable	1,800	Notes Payable	24,700
Office Supplies	800	Total Liabilities	27,400
Land	34,500		
Office Furniture	6,300	Stockholders' Equity	
		Common Stock	10,000
		Retained Earnings	11,300
		Total Stockholders' Equity	21,300
Total Assets	$ 48,700	Total Liabilities and Stockholders' Equity	$ 48,700

P1-52B

Requirement 1

	ASSETS				= LIABILITIES	+ EQUITY				
						Contributed Capital	+ Retained Earnings			
	Cash	+ Accounts Receivable	+ Office Supplies	+ Office Furniture	= Accounts Payable	+ Common Stock	– Dividends	+ Service Revenue	– Rent Expense	– Utilities Expense
5	+45,000					+45,000				
Bal.	$45,000					$45,000				
6	–300		+300							
Bal.	$44,700		$300			$45,000				
7				+6,500	+6,500					
Bal.	$44,700		$300	$6,500	$6,500	$45,000				
10	+3,300							+3,300		
Bal.	$48,000		$300	$6,500	$6,500	$45,000		$3,300		
11	–340									–340
Bal.	$47,660		$300	$6,500	$6,500	$45,000		$3,300		$340
12		+16,000						+16,000		
Bal.	$47,660	$16,000	$300	$6,500	$6,500	$45,000		$19,300		$340
18	–1,800								–1,800	
Bal.	$45,860	$16,000	$300	$6,500	$6,500	$45,000		$19,300	$1,800	$340
25	+16,000	–16,000								
Bal.	$61,860	$ 0	$300	$6,500	$6,500	$45,000		$19,300	$1,800	$340
27	–6,500				–6,500					
Bal.	$55,360	$ 0	$300	$6,500	$ 0	$45,000		$19,300	$1,800	$340
31	–3,800						–3,800			
Bal.	$51,560	$ 0	$300	$6,500	$ 0	$45,000	$3,800	$19,300	$1,800	$340

P1-52B, cont.
Requirement 2a

AMOS SHARP, CPA Income Statement Month Ended October 31, 2018		
Revenues:		
Service Revenue		$ 19,300
Expenses:		
Rent Expense	$ 1,800	
Utilities Expense	340	
Total Expenses		2,140
Net Income		$ 17,160

Requirement 2b

AMOS SHARP, CPA Statement of Retained Earnings Month Ended October 31, 2018	
Retained Earnings, October 1, 2018	$ 0
Net income for the month	17,160
	17,160
Dividends	(3,800)
Retained Earnings, October 31, 2018	$ 13,360

Requirement 2c

AMOS SHARP, CPA
Balance Sheet
October 31, 2018

Assets		Liabilities	
Cash	$ 51,560		
Office Supplies	300		
Office Furniture	6,500	Stockholders' Equity	
		Common Stock	$ 45,000
		Retained Earnings	13,360
		Total Stockholders' Equity	58,360
Total Assets	$ 58,360	Total Liabilities and Stockholders' Equity	$ 58,360

P1-53B
Requirement 1

	ASSETS							=	LIABILITIES	+	EQUITY								
											Contributed Capital	+	Retained Earnings						
	Cash	+	Accounts Receivable	+	Office Supplies	+	Computer	=	Accounts Payable	+	Common Stock	–	Dividends	+	Service Revenue	–	Utility Expense	–	Misc. Expense
3	+89,000										+89,000								
5	–600				+600														
Bal.	$88,400				$600	+		=		+	$89,000								
7							+8,000		+8,000										
Bal.	$88,400			+	$600	+	$8,000	=	$8,000	+	$89,000								
9	+2,900														+2,900				
Bal.	$91,300			+	$600	+	$8,000	=	$8,000	+	$89,000			+	$2,900				
15									+300										–300
Bal.	$91,300			+	$600	+	$8,000	=	$8,300	+	$89,000			+	$2,900	–		–	$300
23			+8,000												+8,000				
Bal.	$91,300	+	$8,000	+	$600	+	$8,000	=	$8,300	+	$89,000			+	$10,900	–		–	$300
28	–300								–300										
Bal.	$91,000	+	$8,000	+	$600	+	$8,000	=	$8,000	+	$89,000			+	$10,900	–		–	$300
30	–900																–900		
Bal.	$90,100	+	$8,000	+	$600	+	$8,000	=	$8,000	+	$89,000			+	$10,900	–	$900	–	$300
31	+2,800		–2,800																
Bal.	$92,900	+	$5,200	+	$600	+	$8,000	=	$8,000	+	$89,000			+	$10,900	–	$900	–	$300
31	–3,000												–3,000						
Bal.	$89,900	+	$5,200	+	$600	+	$8,000	=	$8,000	+	$89,000	–	$3,000	+	$10,900	–	$900	–	$300

P1-53B, cont.
Requirement 2a

ABBY PERRY, ATTORNEY
Income Statement
Month Ended December 31, 2018

Revenues:		
Service Revenue		$ 10,900
Expenses:		
Utility Expense	$ 900	
Miscellaneous Expense	300	
Total Expenses		1,200
Net Income		$ 9,700

Requirement 2b

ABBY PERRY, ATTORNEY
Statement of Retained Earnings
Month Ended December 31, 2018

Retained Earnings, December 1, 2018	$ 0
Net income for the month	9,700
	9,700
Dividends	(3,000)
Retained Earnings, December 31, 2018	$ 6,700

Requirement 2c

ABBY PERRY, ATTORNEY
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 89,900	Accounts Payable	$ 8,000
Accounts Receivable	5,200		
Office Supplies	600	Stockholders' Equity	
Computer	8,000	Common Stock	89,000
		Retained Earnings	6,700
		Total Stockholders' Equity	95,700
Total Assets	$ 103,700	Total Liabilities and Stockholders' Equity	$ 103,700

P1-53B, cont.
Requirement 2d

ABBY PERRY, ATTORNEY
Statement of Cash Flows
Month Ended December 31, 2018

Cash flows from operating activities:		
Receipts:		
Collections from customers		$ 5,700
Payments:		
To suppliers		(1,800)
Net cash provided by operating activities		3,900
Cash flows from investing activities:		0
Cash flows from financing activities		
Issued common stock	$ 89,000	
Payment of cash dividends	(3,000)	
Net cash provided by financing activities		86,000
Net increase in cash		89,900
Cash balance, December 1, 2018		0
Cash balance, December 31, 2018		$ 89,900

Using Excel

P1-54

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is located in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P1-55, Requirement 1

	ASSETS							=	LIABILITIES					+	EQUITY												
															Contributed Capital	+	Retained Earnings										
	Cash	+	Accounts Receivable	+	Office Supplies	+	Canoes	=	Accounts Payable	+	Utilities Payable	+	Telephone Payable	+	Common Stock	–	Dividends	+	Canoe Rental Revenue	–	Rent Expense	–	Utilities Expense	–	Wages Expense	–	Telephone Expense
1	+16,000														+16,000												
2	–1,200																				–1,200						
Bal.	$14,800							=						+	$16,000					–	$1,200						
3							+4,800		+4,800																		
Bal.	$14,800					+	$4,800	=	$4,800					+	$16,000					–	$1,200						
4					+750				+750																		
Bal.	$14,800				$750	+	$4,800	=	$5,550					+	$16,000					–	$1,200						
7	+1,400																		+1,400								
Bal.	$16,200			+	$750	+	$4,800	=	$5,550					+	$16,000			+	$1,400	–	$1,200						
13	–1,500																								–1,500		
Bal.	$14,700			+	$750	+	$4,800	=	$5,550					+	$16,000			+	$1,400	–	$1,200			–	$1,500		
15	–50																–50										
Bal.	$14,650			+	$750	+	$4,800	=	$5,550					+	$16,000	–	$50	+	$1,400	–	$1,200			–	$1,500		
16											+150												–150				
Bal.	$14,650			+	$750	+	$4,800	=	$5,550	+	$150			+	$16,000	–	$50	+	$1,400	–	$1,200	–	$150	–	$1,500		
20													+175														–175
Bal.	$14,650			+	$750	+	$4,800	=	$5,550	+	$150	+	$175	+	$16,000	–	$50	+	$1,400	–	$1,200	–	$150	–	$1,500	–	$175
22			+3,000																+3,000								
Bal.	$14,650	+	$3,000	+	$750	+	$4,800	=	$5,550	+	$150	+	$175	+	$16,000	–	$50	+	$4,400	–	$1,200	–	$150	–	$1,500	–	$175
26	–1,000								–1,000																		
Bal.	$13,650	+	$3,000	+	$750	+	$4,800	=	$4,550	+	$150	+	$175	+	$16,000	–	$50	+	$4,400	–	$1,200	–	$150	–	$1,500	–	$175
28	+750		–750																								
Bal.	$14,400	+	$2,250	+	$750	+	$4,800	=	$4,550	+	$150	+	$175	+	$16,000	–	$50	+	$4,400	–	$1,200	–	$150	–	$1,500	–	$175
30	–100																–100										
Bal.	$14,300	+	$2,250	+	$750	+	$4,800	=	$4,550	+	$150	+	$175	+	$16,000	–	$150	+	$4,400	–	$1,200	–	$150	–	$1,500	–	$175

P1-55, cont.

Requirement 2

CANYON CANOE COMPANY
Income Statement
Month Ended November 30, 2018

Revenue:		
Canoe Rental Revenue		$ 4,400
Expenses:		
Wages Expense	$ 1,500	
Rent Expense	1,200	
Telephone Expense	175	
Utilities Expense	150	
Total Expense		3,025
Net Income		$ 1,375

Requirement 3

CANYON CANOE COMPANY
Statement of Retained Earrings
Month Ended November 30, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the month	1,375
	1,375
Dividends	(150)
Retained Earnings, November 30, 2018	$ 1,225

Requirement 4

CANYON CANOE COMPANY
Balance Sheet
November 30, 2018

Assets		Liabilities	
Cash	$ 14,300	Accounts Payable	$ 4,550
Accounts Receivable	2,250	Utilities Payable	150
Office Supplies	750	Telephone Payable	175
Canoes	4,800	Total Liabilities	4,875
		Stockholders' Equity	
		Common Stock	16,000
		Retained Earnings	1,225
		Total Stockholder's Equity	17,225
Total Assets	$ 22,100	Total Liabilities and Stockholders' Equity	$ 22,100

P1-55, cont.

Requirement 5

Average total assets = ($0 + $22,100) / 2 = $11,050

Return on assets = Net income / Average total assets = $1,375 / $11,050 = 0.124 = 12.4%

Critical Thinking

Tying It All Together Case 1-1
Requirement 1

Starbucks Corporation would report the cost of internet service as an expense on its income statement. Most likely, the expense would be included in Store Operating Expenses.

Requirement 2

When Starbucks receives a bill from its internet service provider, Starbucks would record the following:
Increase Accounts Payable
Increase Store Operating Expenses
This would cause liabilities to increase and equity to decrease.

Requirement 3

When Starbucks pays the bill, Starbucks would record the following:
Decrease Cash
Decrease Accounts Payable
This would cause assets to decrease and liabilities to decrease.

Requirement 4

An increase in the cost of internet service in the coming year would cause expenses to increase. If revenue did not change, this would cause net income to decrease. Starbucks might overcome this impact by charging customers for using the internet service, thereby offsetting the increase in expenses with additional revenue. This change, though, might discourage customers from visiting Starbucks when other competitors might offer free internet service. Another alternative would be to increase the prices of the products sold to cover the increased cost of internet service.

Decision Case 1-1
Requirement 1

Greg's Tunes has more assets.
Sal's $23,000, Greg's $25,000 ($10,000 + $6,000 + $9,000)

Requirement 2

Greg's Tunes owes more to creditors.
Sal's $2,000 ($23,000 – ($8,000 + $35,000 – $22,000)), Greg's $10,000

Requirement 3

Sal's Silly Songs has more stockholders' equity.
Sal's $21,000 ($8,000 + $35,000 – $22,000) Greg's $15,000 ($6,000 + $9,000)

Requirement 4

Greg's Tunes earned more revenue.
Sal's $35,000, Greg's $53,000 ($9,000 + $44,000)

Requirement 5

Sal's Silly Songs is more profitable.
Sal's $13,000 ($35,000 – $22,000), Greg's $9,000

Requirement 6

This question is opinion based. More profit is good, which means Sal's has the advantage. Greg's also owes more to creditors which is risky. Sal's has much more equity, which minimizes risk.

Requirement 7

Sal's looks financially better, because Sal earned more net income on less total revenue. Sal also owes less to creditors and has more equity.

Ethical Issues 1-1
Requirement 1

The chief financial officer (CFO) of Philip Morris would be torn between addressing the fact that the payments are related to illnesses caused by the company’s products, or alternatively, omitting or concealing this fact. The ethical course of action for the CFO is to be open, honest and forthcoming about the reasons for the payments.

Requirement 2

Negative consequences of not telling the truth are as follows: If users of the financial statements feel they are only getting part of the truth, or that the reports are distorting the information, this will damage the credibility of the company, and damage the company’s reputation.

Negative consequences of telling the truth include painting so bleak a picture of the effects of smoking that investors will view Philip Morris as too risky and stop buying the company’s stock. Another negative consequence would be to create the impression that the company is engaged in unethical behavior by selling a product that damages people’s health.

Fraud Case 1-1
Requirement 1

The proposed action would increase net income by increasing revenues. It would distort the balance sheet by understating liabilities and overstating equity.

Requirement 2

By making the company's financial situation look better than it actually was, the company's creditors would likely be more willing to extend credit to the company, and offer the credit at a lower interest rate.

Financial Statement Case 1-1
Requirement 1

$4,046 (in millions)

Requirement 2

$40,262 (in millions) at January 30, 2016; $41,172 (in millions) at January 31, 2015

Requirement 3

Assets	=	Liabilities	+	Equity
$40,262	=	$27,305	+	$12,957

(shown in millions)

Requirement 4

$73,785 (in millions) for year ended January 30, 2016. This is an increase of $1,167 (in millions) over fiscal year 2014. ($73,785− $72,618)

Requirement 5

$3,363 (in millions) in 2015
$(1,636) (in millions) in 2014
Target has a net loss in 2014. Therefore, 2015 was better than 2014.

Requirement 6

All amounts in millions.
Average total assets = ($41,172 + $40,262) / 2 = $40,717
Return on assets = $3,363 / $40,717 = 0.0826 = 8.3%

Requirement 7

Target Corporation's return on assets (8.3%) was significantly higher than Kohl's Corporation (4.8%).

2 Recording Business Transactions

Where's the Money?

Rachel Long scoured through the stacks of printouts. She had been hired to work on an embezzlement (stealing cash or assets of an entity) case for a local school district. The chief financial officer had called her because he suspected one of his employees was stealing money from the Parent Teacher Association (PTA). Rachel loved working on embezzlement cases. She enjoyed searching through the financial statements, identifying a problem, and then finding the transactions that documented the embezzlement. Rachel knew that if she looked deeply enough she would find the evidence that money was stolen. She always treated these cases as a puzzle that needed to be solved.

Sometimes businesses are unfortunate enough to have employees steal from them, and they need help in identifying the thief and providing enough evidence to turn the matter over to a law enforcement agency. Businesses often turn to an accountant, such as Rachel, who specializes in fraud, often called a *certified fraud examiner (CFE)*. In addition, businesses hire accountants to help protect their assets by identifying potential problems in their recordkeeping and control of cash and assets.

Where will Rachel start looking when she begins searching for the stolen money? She'll start at the source, by reviewing documents such as invoices, sales receipts, and bank deposit slips. She will then review the transactions that were recorded (or not recorded) from those documents. These two pieces will help Rachel determine whether money was stolen from the school district and how the embezzlement occurred. It's important to Rachel that she not only catches the thief but also helps the school district prevent losses in the future. She will use her knowledge and experience in accounting to help her.

Why Is Recording Business Transactions Important?

Accounting is based on transactions. The recording of those transactions is based on source documents that provide the proof of the financial position of the business. The lack of that proof can lead to discoveries of stolen money and fictitious financial statements. As an example, in 2011, a former Fry's Electronics executive pleaded guilty, was sentenced to 6 years in federal prison, and ordered to pay $65 million dollars in restitution. The executive's fraud was discovered when another employee saw confidential source documents on the employee's desk that had been falsified. This discovery led to uncovering a dummy company that had received over $80 million dollars of payments without any evidence to support it. The recording of transactions from source documents is the first step in the accounting process—and one of the most important. In this chapter, you learn about source documents and how to record transactions.

Chapter 2 Learning Objectives

1. Explain accounts as they relate to the accounting equation and describe common accounts
2. Define debits, credits, and normal account balances using double-entry accounting and T-accounts
3. Record transactions in a journal and post journal entries to the ledger
4. Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements
5. Use the debt ratio to evaluate business performance

Smart Touch Learning started out by recording the company's business transactions in terms of the accounting equation. That procedure works well when learning how to analyze transactions, but it's not a method in which a real-world business actually records transactions. In this chapter, you learn a more efficient way to capture business transactions. First, we need to start with a review of the accounting equation.

WHAT IS AN ACCOUNT?

Learning Objective 1
Explain accounts as they relate to the accounting equation and describe common accounts

Recall that the basic tool of accounting is the accounting equation:

Assets = Liabilities + Equity

The accounting equation is made up of three parts or categories: assets, liabilities, and equity. Each category contains accounts. An **account** is the detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specified period.

Account
A detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period.

Assets

Assets are economic resources that are expected to benefit the business in the future—something the business owns or has control of that has value. Exhibit 2-1 (on the next page) contains a list of asset accounts that most businesses use.

Liabilities

Recall that a *liability* is a debt—that is, something the business owes. A business generally has fewer liability accounts than asset accounts. Exhibit 2-2 (on the next page) contains examples of common liability accounts.

I get confused by the difference between Accounts Receivable and Accounts Payable. Is there an easy way to remember these two accounts?

You might be confused by the difference between the asset account, Accounts Receivable, and the liability account, Accounts Payable. An easy way to remember the distinction between these two accounts involves the words *Receivable* and *Payable*. A *receivable* involves a future *receipt* of cash. A *payable* involves a future *payment* of cash.

Exhibit 2-1 | **Asset Accounts**

Account Name	Explanation
Cash	A business's money. Includes bank balances, bills, coins, and checks.
Accounts Receivable	A customer's promise to pay in the future for services or goods sold. Often described as "On Account."
Notes Receivable	A *written* promise that a customer will pay a fixed amount of money and *interest* by a certain date in the future. Usually more formal than an Accounts Receivable.
Prepaid Expense	A payment of an expense in advance. It is considered an asset because the prepayment provides a benefit in the future. Examples of prepaid expenses are *Prepaid Rent*, *Prepaid Insurance*, and *Office Supplies*.
Land	The cost of land a business uses in operations.
Building	The cost of an office building, a store, or a warehouse.
Equipment, Furniture, and Fixtures	The cost of equipment, furniture, and fixtures (such as light fixtures and shelving). A business has a separate asset account for each type.

Notes Receivable
A written promise that a customer will pay a fixed amount of principal plus interest by a certain date in the future.

Prepaid Expense
A payment of an expense in advance.

Exhibit 2-2 | **Liability Accounts**

Account Name	Explanation
Accounts Payable	A promise made by the business to pay a debt in the future. Arises from a credit purchase.
Notes Payable	A *written* promise made by the business to pay a debt, usually involving *interest,* in the future.
Accrued Liability	An amount owed but not paid. A specific type of payable such as *Taxes Payable*, *Rent Payable*, and *Salaries Payable*.
Unearned Revenue	Occurs when a company receives cash from a customer but has not provided the product or service. The promise to provide services or deliver goods in the future.

Notes Payable
A *written* promise made by the business to pay a debt, usually involving *interest*, in the future.

Accrued Liability
A liability for which the business knows the amount owed but the bill has not been paid.

Unearned Revenue
A liability created when a business collects cash from customers in advance of providing services or delivering goods.

Equity

The stockholders' claim to the assets of the business is called *equity* or *stockholders' equity*. As shown in Exhibit 2-3, a company has separate accounts for each element of equity.

Exhibit 2-3 | **Equity Accounts**

Account Name	Explanation
Common Stock	Represents the net contributions of the stockholders in the business. Increases equity.
Dividends	Distributions of cash or other assets to the stockholders. Decreases equity.
Revenues	Earnings that result from delivering goods or services to customers. Increases equity. Examples include *Service Revenue* and *Rent Revenue*.
Expenses	The cost of selling goods or services. Decreases equity. Examples include *Rent Expense*, *Salaries Expense*, and *Utilities Expense*.

Chart of Accounts

Companies need a way to organize their accounts. They use a **chart of accounts** to do this. A chart of accounts lists all company accounts along with the account numbers. The chart of accounts for Smart Touch Learning appears in Exhibit 2-4. Account numbers are just shorthand versions of the account names. One account number equals one account name—just like your Social Security number is unique to you.

Chart of Accounts
A list of all of a company's accounts with their account numbers.

Exhibit 2-4 | **Chart of Accounts—Smart Touch Learning**

Balance Sheet and Statement of Retained Earnings Accounts		
Assets	**Liabilities**	**Equity**
101 Cash	201 Accounts Payable	301 Common Stock
111 Accounts Receivable	211 Salaries Payable	311 Retained Earnings
121 Notes Receivable	221 Interest Payable	321 Dividends
141 Office Supplies	231 Unearned Revenue	
151 Land	241 Notes Payable	
171 Building		
191 Furniture		
	Income Statement Accounts (Part of Equity)	
	Revenues	**Expenses**
	401 Service Revenue	501 Rent Expense
	411 Interest Revenue	511 Salaries Expense
		521 Utilities Expense
		531 Advertising Expense

It can be confusing to choose the correct account to use when there are multiple accounts that sound similar. As an example, let's think about rent. There are four types of rent accounts: Prepaid Rent (asset), Rent Payable (liability), Rent Revenue (equity), or Rent Expense (equity). It is important that we understand the definition of each type of account so that we can use the account correctly. Prepaid Rent represents a prepayment of cash for renting a building in the future. Rent Payable represents a debt owed for renting a building currently, and Rent Expense represents the cost of renting a building currently. Rent Revenue, on the other hand, relates to the earning of revenue related to renting the building to a tenant currently.

IFRS

Worldwide, accounting systems are based on the same equation: Assets = Liabilities + Equity. Or, in Spanish: Activos = Pasivos + Patrimonio Neto. And accounts are the building blocks for all accounting systems.

Ledger

The record holding all the accounts of a business, the changes in those accounts, and their balances.

What are the similarities and differences between a chart of accounts and a ledger?

Account numbers usually have two or more digits. Assets are often numbered beginning with 1, liabilities with 2, stockholders' equity with 3, revenues with 4, and expenses with 5. The second and third digits in an account number indicate where the account fits within the category. For example, if Smart Touch Learning is using three-digit account numbers, Cash may be account number 101, the first asset account. Accounts Receivable may be account number 111, the second asset. Accounts Payable may be account number 201, the first liability. When numbers are used, all accounts are numbered by this system. However, each company chooses its own account numbering system.

Notice in Exhibit 2-4 (on the previous page) the gap in account numbers between 121 and 141. Smart Touch Learning may need to add another asset account in the future. For example, the business may start selling some type of inventory and want to use account number 131 for Merchandise Inventory. So, the chart of accounts will change as the business evolves.

The chart of accounts varies from business to business, though many account names are common to all companies. For example, you will find Cash on every company's chart of accounts. The chart of accounts contains the list of account names you will use to record a transaction.

Ledger

In addition to a chart of accounts, companies need a way to show all of the increases and decreases in each account along with their balances. Companies use a **ledger** to fulfill this task. A ledger is a collection of all the accounts, the changes in those accounts, and their balances. **A chart of accounts and a ledger are similar in that they both list the account names and account numbers of the business. A ledger, though, provides more detail. It includes the increases and decreases of each account for a specific period and the balance of each account at a specific point in time.**

Try It!

Consider the following accounts and identify each as an asset (A), liability (L), or equity (E).

1. Rent Expense	**6.** Accounts Payable
2. Common Stock	**7.** Unearned Revenue
3. Furniture	**8.** Notes Receivable
4. Service Revenue	**9.** Dividends
5. Prepaid Insurance	**10.** Insurance Expense

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S2-1. MyAccountingLab

WHAT IS DOUBLE-ENTRY ACCOUNTING?

Learning Objective 2
Define debits, credits, and normal account balances using double-entry accounting and T-accounts

Previously you learned that every transaction must be recorded into at least two accounts. For example, when a stockholder contributes money in exchange for Common Stock, the two accounts involved are Cash and Common Stock. Accounting uses this **double-entry system** to record the dual effects of each transaction. A transaction would be incomplete if only one side were recorded.

Double-Entry System
A system of accounting in which every transaction affects at least two accounts.

Consider a cash purchase of office supplies. What are the dual effects? A cash purchase of office supplies:

1. Increases the account Office Supplies (the business received office supplies).
2. Decreases Cash (the business paid cash).

The T-Account

A shortened form of an account in the ledger is called the **T-account** because it takes the form of the capital letter *T*. The vertical line divides the account into its left and right sides, with the account name at the top. For example, the Cash T-account appears as follows:

T-Account
A summary device that is shaped like a capital *T* with debits posted on the left side of the vertical line and credits on the right side of the vertical line.

Account name

Cash	
Debit (DR)	Credit (CR)

The left side of the T-account is called the **debit** side, and the right side is called the **credit** side. To become comfortable using these terms, remember the following: Debits go on the left; credits go on the right. Debit is abbreviated as DR, and Credit is abbreviated as CR.

Debit
The left side of a T-account.

Credit
The right side of a T-account.

Increases and Decreases in the Accounts

How we record increases and decreases to an account is determined by the account type (asset, liability, or equity). For any given account, increases are recorded on one side and decreases are recorded on the opposite side. The following T-accounts provide a summary:

ASSETS		=	LIABILITIES		+	EQUITY	
↑	↓		↓	↑		↓	↑
Debit	Credit		Debit	Credit		Debit	Credit

In other words, assets are always increased with a *debit* and decreased with a *credit*. Liabilities and equity are always increased with a *credit* and decreased with a *debit*. Whether an account is increased or decreased by a debit or a credit depends on the type of account. Debits are not "good" or "bad." Neither are credits. Debits are not always increases or always decreases—neither are credits. **The only thing a designation as a debit or credit means is where the item is placed—on the left or right side of the T-account.**

In a computerized accounting information system, the computer interprets debits and credits as increases or decreases, based on the account type. For example, a computer reads a debit to Cash as an increase because it is an asset account. The computer reads a debit to Accounts Payable as a decrease because it is a liability account.

I always thought that a debit meant decrease and a credit meant increase. Am I wrong?

Example: Assume a business wants to record an increase of $30,000 to the Cash account. The business would record a debit to Cash as follows:

	Cash	
Debit →	30,000	

Cash is an asset account and, remember, asset accounts are increased with debits.

Example: What if the business, instead, wanted to record a decrease of $20,000 to the Cash account? The business would record a credit to Cash because Cash is an asset account and asset accounts are decreased with credits:

Cash		
	20,000	← Credit

Expanding the Rules of Debit and Credit

As we have noted, equity contains four account types: Common Stock, Dividends, Revenues, and Expenses. Common Stock and Revenues increase equity, whereas Dividends and Expenses decrease equity. We must now expand the accounting equation and the rules of debits and credits to include all elements of equity:

EQUITY

Contributed Capital + Retained Earnings

ASSETS		=	LIABILITIES		+	Common Stock		−	Dividends		+	Revenues		−	Expenses	
↑	↓		↓	↑		↓	↑		↑	↓		↓	↑		↑	↓
Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit

Notice in the expanded accounting equation that Dividends and Expenses record increases and decreases opposite of Common Stock and Revenues. This is because increases in Dividends and Expenses decrease equity.

The Normal Balance of an Account

Normal Balance
The balance that appears on the increase side of an account.

All accounts have a normal balance. An account's **normal balance** appears on the side—either debit or credit—where we record an *increase* (↑) in the account's balance. For example, assets are increased with a debit, so the normal balance is a debit. Liabilities are increased with a credit, so the normal balance is a credit. Expenses and Dividends are equity accounts that have normal debit balances—unlike the other equity accounts. They have debit balances because they decrease equity. Common Stock and Revenues have a normal balance of credit. Let's look again at the accounting equation, this time with the normal balances marked:

EQUITY

Contributed Capital + Retained Earnings

ASSETS		=	LIABILITIES		+	Common Stock		−	Dividends		+	Revenues		−	Expenses	
↑	↓		↓	↑		↓	↑		↑	↓		↓	↑		↑	↓
Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit
Normal Balance				Normal Balance			Normal Balance		Normal Balance				Normal Balance		Normal Balance	

An account with a normal debit balance may occasionally have a credit balance. That indicates a negative amount in the account. For example, Cash will have a credit balance if the business overdraws its bank account. Also, the liability, Accounts Payable—a normal credit balance account—could have a debit balance if the company overpays its accounts payable. In other cases, a non-normal account balance indicates an error. For example, a credit balance in Office Supplies, Furniture, or Buildings is an error because negative amounts of these assets make no sense.

Exhibit 2-5 summarizes the rules of debits and credits and the normal balances for each account type.

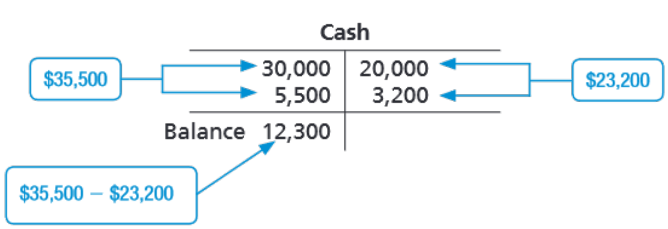
Exhibit 2-5 | **Rules of Debits and Credits and Normal Balances for Each Account Type**

Account Type	Increases	Decreases	Normal Balance
Assets	Debit	Credit	Debit
Expenses	Debit	Credit	Debit
Dividends	Debit	Credit	Debit
Liabilities	Credit	Debit	Credit
Revenues	Credit	Debit	Credit
Common Stock	Credit	Debit	Credit

An easy way to remember the rules of debits and credits is to memorize this helpful sentence. All elephants do love rowdy children. The first three words in the sentence will help you remember that assets, expenses, and dividends all have normal debit balances. The last three words in the sentence will remind you that liabilities, revenues, and common stock all have normal credit balances.

Determining the Balance of a T-Account

T-accounts can be used to determine the amount remaining in an account or the *balance* of the account. To illustrate, let's look at the following Cash T-Account:



The balance of this Cash account is $12,300. This is calculated by adding each side of the account separately ($35,500 and $23,200) and then subtracting the smaller number from the larger number ($35,500 − $23,200). The balance ($12,300) is always reported on the side with the larger number.

Try It!

For each account, identify if the change would be recorded as a debit (DR) or credit (CR).

11. Increase to Cash	**16.** Increase to Interest Revenue
12. Decrease to Accounts Payable	**17.** Increase to Rent Expense
13. Increase to Common Stock	**18.** Decrease to Office Supplies
14. Increase to Unearned Revenue	**19.** Increase to Prepaid Rent
15. Decrease to Accounts Receivable	**20.** Increase to Notes Payable

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S2-2 through S2-4. MyAccountingLab

HOW DO YOU RECORD TRANSACTIONS?

Learning Objective 3
Record transactions in a journal and post journal entries to the ledger

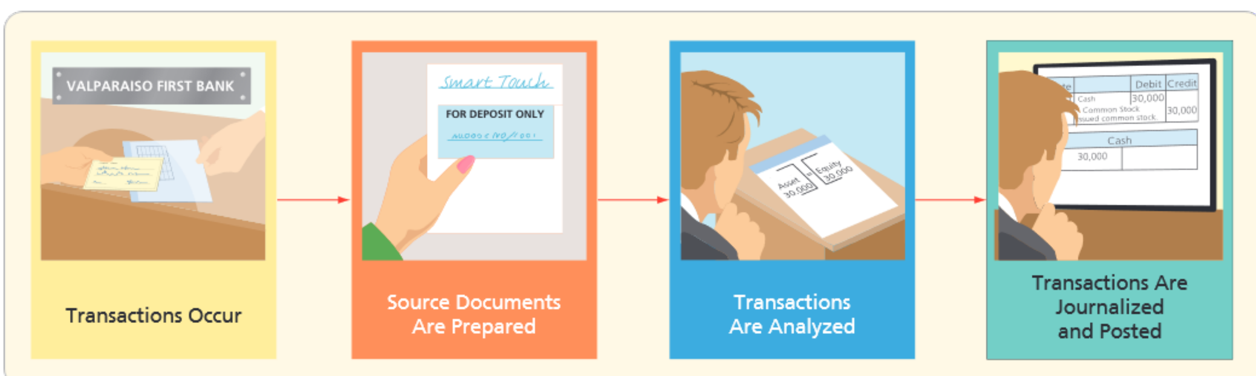
When we reviewed the activity for Smart Touch Learning, we provided you with the transactions. In a real-world business, because of the faithful representation concept, accountants would need to provide evidence for those transactions.

Source Documents—The Origin of the Transactions

Source Document
Provides the evidence and data for accounting transactions.

Accountants use **source documents** to provide the evidence and data for recording transactions. For example, consider Sheena Bright's contribution of $30,000 to the business. Exhibit 2-6 illustrates the transaction. In that exhibit, Smart Touch Learning received $30,000 and deposited it in the bank. The business then gave common stock to Sheena Bright. The check received and the bank deposit slip are the source documents that show the amount of cash received by the business and the equity contribution of the stockholder, Sheena Bright. Based on these documents, the business can determine how to record this transaction.

Exhibit 2-6 | **Flow of Accounting Data**



ETHICS

Are receipts really important?

Elijah Morris, assistant manager for Red's American Burger Restaurant, is responsible for purchasing equipment and supplies for the restaurant. Elijah recently purchased a $4,000 commercial-grade refrigerator for the restaurant, but he can't find the receipt. Elijah purchased the refrigerator with personal funds and is asking to be reimbursed by the restaurant. Hannah, the restaurant's accountant, has said that she is unsure if the business can reimburse Elijah without a receipt. Elijah suggests: "Hannah, it won't really matter if I have a receipt or not. You've seen the refrigerator in the restaurant, so you know I purchased it. What difference is a little receipt going to make?"

What should Hannah do? What would you do?

Solution

Hannah should not reimburse Elijah until she receives the receipt—the source document. Elijah could have purchased the refrigerator for less than the amount he is asking in reimbursement. Source documents provide the evidence of the amount of the transaction. If either an auditor or the owner of the restaurant investigated the $4,000 purchase, he or she would need to see the source document to verify the transaction. If Elijah truly cannot find the receipt, Hannah should ask for an alternative source document such as a credit card or bank statement that shows evidence of the purchase. In addition, Elijah should be warned about using personal funds to purchase equipment for the business.

Other source documents that businesses use include the following:

- **Purchase invoices.** Documents that tell the business how much and when to pay a vendor for purchases on account, such as office supplies.
- **Bank checks.** Documents that illustrate the amount and date of cash payments.
- **Sales invoices.** Documents provided to clients when a business sells services or goods; tells the business how much revenue to record.

Journalizing and Posting Transactions

After accountants review the source documents, they are then ready to record the transactions. Transactions are first recorded in a **journal**, which is the record of transactions in date order.

Journalizing a transaction records the data only in the journal—not in the ledger (the record holding all of the accounts of a business). The data must also be transferred to the ledger. The process of transferring data from the journal to the ledger is called **posting**. We post from the journal to the ledger. Debits in the journal are posted as debits in the ledger and credits as credits—no exceptions.

The following diagram shows this process:

Journal
A record of transactions in date order.

Posting
Transferring data from the journal to the ledger.

Date		Debit	Credit
Nov.1	Cash	30,000	
	Common Stock		30,000
	Issued common stock.		

Transactions are recorded in a journal.

Cash	
30,000	

Common Stock	
	30,000

Data is posted (transferred) to the ledger.

You have learned steps to use when analyzing accounting transactions. Use a modified version of those steps to help when recording transactions in the journal and then posting the journal entries to the ledger. The journalizing and posting process has five steps:

Step 1: Identify the accounts and the account type (asset, liability, or equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits.

Step 3: Record the transaction in the journal.

Step 4: Post the journal entry to the ledger.

Step 5: Determine whether the accounting equation is in balance.

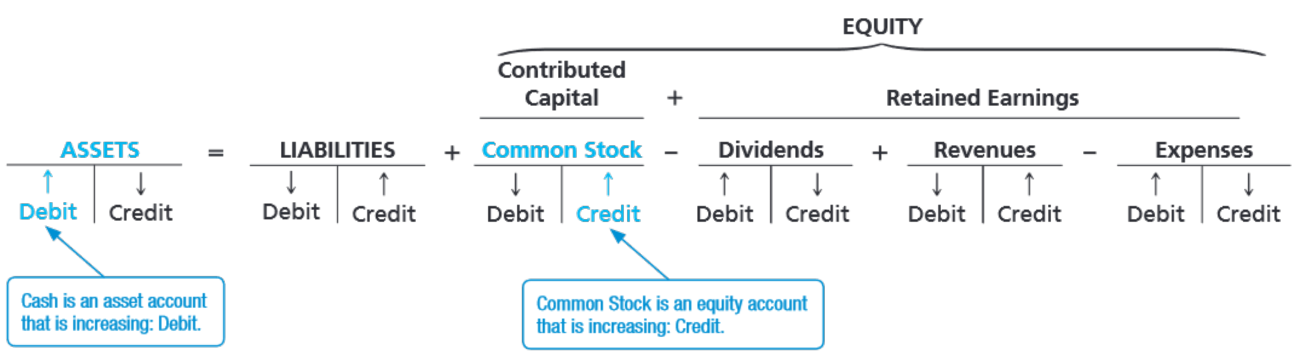
Let's begin by journalizing the first transaction of Smart Touch Learning.

Transaction 1—Stockholder Contribution

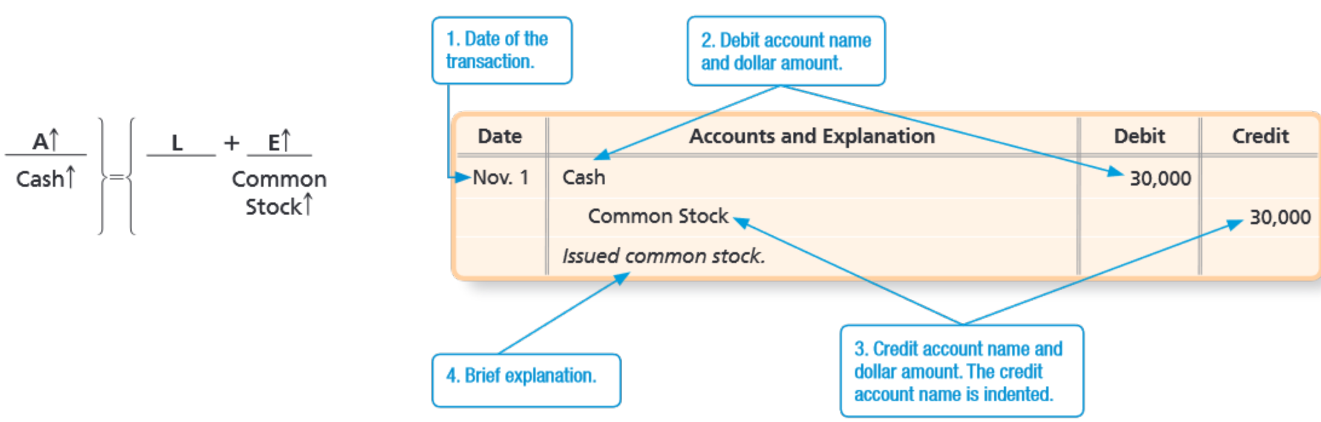
On November 1, the e-learning company received $30,000 cash from Sheena Bright and the business issued common stock to her.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Common Stock (Equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Both accounts increase by $30,000. Reviewing the rules of debits and credits, we use the accounting equation to help determine debits and credits for each account. Cash is an asset account and is increasing, so we will record a debit to Cash. Common Stock is an equity account and is increasing, so we will record a credit to Common Stock.



Step 3: Record the transaction in the journal. The recording of a transaction in the journal creates a journal entry. The journal entry for Transaction 1 is illustrated below. Notice that each journal entry contains four parts.



Step 4: Post the journal entry to the ledger. When transactions are posted from the journal to the ledger, the dollar amount is transferred from the debit and credit columns to the specific account. The date of the journal entry is also transferred to the T-accounts in the ledger. In a computerized system, this step is completed automatically when the transaction is recorded in the journal.

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash	30,000	
	Common Stock		30,000
	Issued common stock.		

A↑	} = {	L	+	E↑
Cash↑				Common Stock↑

Cash	
Nov. 1 30,000	

Common Stock	
	30,000 Nov. 1

Step 5: Determine if the accounting equation is in balance.

	ASSETS		LIABILITIES	+	EQUITY
	Cash	=			Common Stock
(1)	+ 30,000				+ 30,000

To help reinforce your learning of the account types, we will illustrate the transaction in the margin. We will indicate the accounts and account type (Step 1) and whether each account is increasing or decreasing (Step 2). These notations would not normally show up in a journal, but we have included them here to reinforce the rules of debits and credits.

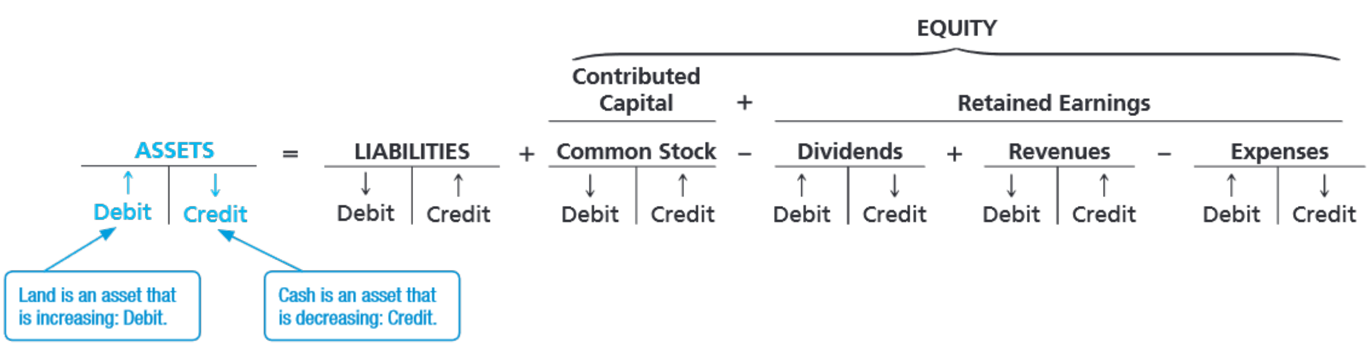
Let's look at Transaction 2 for Smart Touch Learning and apply the steps we just learned.

Transaction 2—Purchase of Land for Cash

On November 2, Smart Touch Learning paid $20,000 cash for land.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Land (Asset).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Cash decreases. The business paid cash. Therefore, we credit Cash. The land increased, so we debit the Land account.



Step 3: Record the transaction in the journal.

A↑↓	=	L + E
Land↑ Cash↓		

Date	Accounts and Explanation	Debit	Credit
Nov. 2	Land	20,000	
	Cash		20,000
	Paid cash for land.		

Step 4: Post the journal entry to the ledger.

Cash			
Nov. 1	30,000	20,000	Nov. 2

Land			
Nov. 2	20,000		

Step 5: Determine whether the accounting equation is in balance.

	ASSETS			=	LIABILITIES	+	EQUITY
	Cash	+	Land			+	Common Stock
Bal.	$30,000						$30,000
(2)	−20,000		+20,000				
Bal.	$10,000	+	$20,000				$30,000

We will now record journal entries for several more transactions for Smart Touch Learning. Now that you understand the steps, try to write the steps yourself before looking at the journal entry. Remember, if you need help, we'll provide the effect on the accounting equation in the margin.

Transaction 3—Purchase of Office Supplies on Account

Smart Touch Learning buys $500 of office supplies on account on November 3.

The supplies will benefit Smart Touch Learning in future periods, so they are an asset to the company until they are used. The asset Office Supplies increased, so we debit Office Supplies. The liability Accounts Payable increased, so we credit Accounts Payable.

A↑	=	L↑ + E
Office Supplies↑		Accounts Payable↑

Date	Accounts and Explanation	Debit	Credit
Nov. 3	Office Supplies	500	
	Accounts Payable		500
	Purchased office supplies on account.		

Office Supplies			
Nov. 3	500		

Accounts Payable			
		500	Nov. 3

Transaction 4—Earning of Service Revenue for Cash

On November 8, Smart Touch Learning collected cash of $5,500 for service revenue that the business earned by providing e-learning services for clients.

The asset Cash increased, so we debit Cash. Revenue increased, so we credit Service Revenue.

Date	Accounts and Explanation	Debit	Credit
Nov. 8	Cash	5,500	
	Service Revenue		5,500
	Performed services and received cash.		

A↑	=	L + E↑
Cash↑		Service Revenue↑

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500		

Service Revenue

		5,500	Nov. 8

Transaction 5—Earning of Service Revenue on Account

On November 10, Smart Touch Learning performed services for clients, for which the clients will pay the company later. The business earned $3,000 of service revenue on account.

This transaction increased Accounts Receivable, so we debit this asset. Service Revenue is increased with a credit.

Date	Accounts and Explanation	Debit	Credit
Nov. 10	Accounts Receivable	3,000	
	Service Revenue		3,000
	Performed services on account.		

A↑	=	L + E↑
Accounts Receivable↑		Service Revenue↑

Accounts Receivable

Nov. 10	3,000		

Service Revenue

		5,500	Nov. 8
		3,000	Nov. 10

Notice the differences and the similarities between Transactions 4 and 5. In both transactions, Service Revenue was increased (credited) because in both cases the company had earned revenue. However, in Transaction 4, the company was paid at the time of service. In Transaction 5, on the other hand, the company will receive cash later (Accounts Receivable). This difference is key because the amount of revenue is not determined by when the company *receives* cash. Revenues are recorded when the company *does* the work or provides the service.

Transaction 6—Payment of Expenses with Cash

Smart Touch Learning paid the following cash expenses on November 15: office rent, $2,000, and employee salaries, $1,200. We need to debit each expense account to record its increase and credit Cash, an asset, for the total decrease.

A↓	=	L	+	E↓
Cash↓				Rent Expense↑ Salaries Expense↑

Date	Accounts and Explanation	Debit	Credit
Nov. 15	Rent Expense	2,000	
	Salaries Expense	1,200	
	Cash		3,200
	Paid cash expenses.		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15

Rent Expense

Nov. 15	2,000	

Salaries Expense

Nov. 15	1,200	

Compound Journal Entry
A journal entry that is characterized by having multiple debits and/or multiple credits.

I thought expenses decreased equity, but we are debiting the expense that records an increase to the account.

Notice that the journal entry has three accounts involved—two debits and one credit. This is a compound journal entry. A **compound journal entry** has more than two accounts, but the total dollar value of the debits still must equal the total dollar value of the credits.

Before we move to the next transaction, let's take a moment to carefully look at expenses. In Transaction 6, we recorded a debit to each expense account. The accounting equation and the rules of debits and credits state that a debit to an expense account increases the account.

We are recording an increase to the expense account because the business has more expenses now than it had before. But, remember, the overall effect on the accounting equation is that increases in expenses decrease equity. An easy way to think about it is that we are increasing a negative account.

The overall effect of an increase to an expense account is a decrease to equity.

EQUITY

Contributed Capital + Retained Earnings

ASSETS		=	LIABILITIES		+	Common Stock		−	Dividends		+	Revenues		−	Expenses	
↑ Debit	↓ Credit		↓ Debit	↑ Credit		↓ Debit	↑ Credit		↑ Debit	↓ Credit		↓ Debit	↑ Credit		↑ Debit	↓ Credit

An expense is increased because the business has more expenses now than before.

Transaction 7—Payment on Account (Accounts Payable)

On November 21, Smart Touch Learning paid $300 on the accounts payable created in Transaction 3. The payment decreased cash, an asset, so we credit Cash. The payment decreased Accounts Payable, so we debit that liability.

Date	Accounts and Explanation	Debit	Credit
Nov. 21	Accounts Payable	300	
	Cash		300
	Paid cash on account.		

A↓	=	L↓	+	E
Cash↓		Accounts Payable↓		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
		300	Nov. 21

Accounts Payable

Nov. 21	300	500	Nov. 3

Notice that after recording this transaction and posting to the Accounts Payable account, the balance of Accounts Payable is $200 ($500 − $300). This is the new balance that the business owes to its creditor.

Transaction 8—Collection on Account (Accounts Receivable)

On November 22, Smart Touch Learning collected $2,000 cash from a client in Transaction 5. Cash is increased, so we debit the asset Cash. Accounts Receivable, also an asset, is decreased, so we credit Accounts Receivable. *Note:* This transaction has no effect on revenue; the related revenue was recorded in Transaction 5.

Date	Accounts and Explanation	Debit	Credit
Nov. 22	Cash	2,000	
	Accounts Receivable		2,000
	Received cash on account.		

A↑↓	=	L	+	E
Cash↑ Accounts Receivable↓				

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21

Accounts Receivable

Nov. 10	3,000	2,000	Nov. 22

Transaction 9—Payment of Cash Dividend

On November 25, a payment of $5,000 cash was paid for dividends. The dividend decreased the entity's cash, so we credit Cash. The dividend also decreased equity. Decreases in equity that result from dividends are debited to the Dividends account.

Date	Accounts and Explanation	Debit	Credit
Nov. 25	Dividends	5,000	
	Cash		5,000
	Paid dividends.		

A↓	=	L	+	E↓
Cash↓				Dividends↑

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
		5,000	Nov. 25

Dividends

Nov. 25	5,000		

Transaction 10—Prepaid Expenses

On December 1, Smart Touch Learning prepays three months' office rent of \$3,000 (\$1,000 per month × 3 months). The prepayment of the rent is recorded to the Prepaid Rent account (Asset). It is recorded as an asset because Smart Touch Learning will receive a benefit in the future. The asset, Prepaid Rent, is increasing, so we will need to debit it. Cash is decreasing and will be recorded as a credit.

A↑↓	=	L	+	E
Prepaid Rent↑ Cash↓				

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
	Paid rent in advance.		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
		5,000	Nov. 25
		3,000	Dec. 1

Prepaid Rent

Dec. 1	3,000		

Transaction 11—Payment of Expense with Cash

On December 1, Smart Touch Learning paid employee salaries of \$1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

A↓	=	L	+	E↓
Cash↓				Salaries Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Salaries Expense	1,200	
	Cash		1,200
	Paid salaries.		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
		5,000	Nov. 25
		3,000	Dec. 1
		1,200	Dec. 1

Salaries Expense

Nov. 15	1,200		
Dec. 1	1,200		

Transaction 12—Purchase of Building with Notes Payable

On December 1, Smart Touch Learning purchased a \$60,000 building in exchange for a note payable. The building will benefit the business in the future, so it is recorded as an asset to the company. The asset Building is increased, so we debit Building. The liability Notes Payable increased, so we credit Notes Payable.

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building	60,000	
	Notes Payable		60,000
	Purchased building with note.		

A↑ Building↑ = L↑ Notes Payable↑ + E

Building			
Dec. 1	60,000		

Notes Payable			
		60,000	Dec. 1

Transaction 13—Stockholder Contribution

On December 2, Smart Touch Learning received a contribution of furniture with a fair market value of $18,000 from Sheena Bright. In exchange, Smart Touch Learning issued common stock. The furniture will benefit the company in the future, so it is recorded as an asset. The asset Furniture is increasing, so we debit it. Common Stock, an equity account, is also increasing and is recorded as a credit.

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture	18,000	
	Common Stock		18,000
	Received furniture in exchange for common stock.		

A↑ Furniture↑ = L + E↑ Common Stock↑

Furniture			
Dec. 2	18,000		

Common Stock			
		30,000	Nov. 1
		18,000	Dec. 2

Transaction 14—Accrued Liability

On December 15, Smart Touch Learning received a telephone bill for $100 and will pay this expense next month. There is no cash payment now. This is an accrued liability. Remember, an accrued liability is a liability for which the business knows the amount owed, but the bill has not been paid. The Utilities Expense increased, so we debit this expense. The liability (Utilities Payable) increased, so we credit Utilities Payable. Alternatively, we could credit Accounts Payable instead of Utilities Payable.

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Utilities Expense	100	
	Utilities Payable		100
	Accrued utility liability.		

A = L↑ Utilities Payable↑ + E↓ Utilities Expense↑

Utilities Payable			
		100	Dec. 15

Utilities Expense			
Dec. 15	100		

Transaction 15—Payment of Expense with Cash

On December 15, Smart Touch Learning paid employee salaries of $1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

A↓	=	L	+	E↓
Cash↓				Salaries Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Salaries Expense	1,200	
	Cash		1,200
	Paid salaries.		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
		5,000	Nov. 25
		3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15

Salaries Expense

Nov. 15	1,200		
Dec. 1	1,200		
Dec. 15	1,200		

Transaction 16—Unearned Revenue

On December 21, a law firm engages Smart Touch Learning to provide e-learning services and agrees to pay $600 in advance. Smart Touch Learning received cash but has not yet performed the services. Cash increased, so we debit Cash. The promise to perform services in the future will be recorded as Unearned Revenue, a liability account. Unearned Revenue is increasing, so we credit it. Notice that we did not record revenue. Revenue is not recorded until Smart Touch Learning provides the services.

A↑	=	L↑	+	E
Cash↑		Unearned Revenue↑		

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
	Collected cash for future services.		

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
Dec. 21	600	5,000	Nov. 25
		3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15

Unearned Revenue

		600	Dec. 21

TYING IT ALL TOGETHER

Fry's Electronics, Inc. was founded in 1985 in Sunnyvale, California, and has grown to 34 stores in 9 different states. The majority of its stores can be found in California and Texas. Fry's sells more than 50,000 electronic items, such as computers, tablets, mobile devices, and car electronics. Fry's Electronics also provides technical services, such as in-home installation of security systems, home theaters, and home networks. In addition, Fry's provides technical support for its customers.

Suppose Fry's Electronics rents the retail space where one of its stores is located. Due to an excess of cash, Fry's decides to prepay the next 6 months rent, totaling $24,000. How would this transaction be recorded by Fry's?

The prepayment of rent expense would be recorded as Prepaid Rent. Prepaid Rent is an asset account that represents payment of an expense in advance. Fry's would record a journal entry as follows:

Date	Accounts and Explanation	Debit	Credit
	Prepaid Rent	24,000	
	Cash		24,000

Why is the prepayment of expenses considered an asset? On what financial statement would the account, Prepaid Rent, be reported?

Prepayment of expenses are considered assets because the prepayment provides a benefit in the future. The rent expense will not be recorded until the monthly rental occurs. Prepaid Rent is reported on the Balance Sheet in the asset section.

Suppose Fry's Electronics rents the retail space from HDK Investments. How would HDK Investments record the receipt of cash for prepaid rent?

HDK Investments would record the receipt of cash as Unearned Revenue. The prepayment of rent would be recorded as unearned revenue because the rental service has not yet been provided. HDK Investments cannot record the prepayment as revenue until the monthly rent has been provided. HDK Investments would record a journal entry as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash	24,000	
	Unearned Revenue		24,000

Notice that when Fry's Electronics recorded the payment of cash, it was a decrease to the asset which is a credit to Cash. However, when HDK Investments recorded the receipt of cash, it was an increase to the asset which is a debit to Cash. A payment of Cash by one business is a receipt of Cash by another.

Instead of prepaying expenses, what else could Fry's Electronics do with its excess cash?

If a company has excess cash, there are several options they could consider. First, the company could keep the cash in a high-interest savings account and earn interest on the cash. The company could also consider investing the money in financial investments such as stocks or bonds. Another option the company should consider is paying down debt.

Transaction 17—Earning of Service Revenue for Cash

On December 28, Smart Touch Learning collected cash of $8,000 for Service Revenue that the business earned by providing e-learning services for clients.

Date	Accounts and Explanation	Debit	Credit
Dec. 28	Cash	8,000	
	Service Revenue		8,000
	Performed services and received cash.		

A↑	=	L	+	E↑
Cash↑				Service Revenue↑

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
Dec. 21	600	5,000	Nov. 25
Dec. 28	8,000	3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15

Service Revenue

		5,500	Nov. 8
		3,000	Nov. 10
		8,000	Dec. 28

The Ledger Accounts After Posting

Exhibit 2-7 (on the next page) shows the T-accounts of Smart Touch Learning after posting the journal entries from the journal to the ledger. The accounts are grouped

Exhibit 2-7 | **Smart Touch Learning's Accounts After Posting Journal Entries in November and December**

ASSETS = LIABILITIES + EQUITY

EQUITY: Contributed Capital + Retained Earnings

Cash = Accounts Payable + Common Stock − Dividends + Service Revenue − Rent Expense

ASSETS

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
Dec. 21	600	5,000	Nov. 25
Dec. 28	8,000	3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15
Bal.	12,200		

Accounts Receivable

Nov. 10	3,000	2,000	Nov. 22
Bal.	1,000		

Office Supplies

Nov. 3	500		
Bal.	500		

Prepaid Rent

Dec. 1	3,000		
Bal.	3,000		

Land

Nov. 2	20,000		
Bal.	20,000		

Building

Dec. 1	60,000		
Bal.	60,000		

Furniture

Dec. 2	18,000		
Bal.	18,000		

LIABILITIES

Accounts Payable

Nov. 21	300	500	Nov. 3
		200	Bal.

Utilities Payable

		100	Dec. 15
		100	Bal.

Unearned Revenue

		600	Dec. 21
		600	Bal.

Notes Payable

		60,000	Dec. 1
		60,000	Bal.

EQUITY

Contributed Capital

Common Stock

		30,000	Nov. 1
		18,000	Dec. 2
		48,000	Bal.

Retained Earnings

Dividends

Nov. 25	5,000		
Bal.	5,000		

Service Revenue

		5,500	Nov. 8
		3,000	Nov. 10
		8,000	Dec. 28
		16,500	Bal.

Rent Expense

Nov. 15	2,000		
Bal.	2,000		

Salaries Expense

Nov. 15	1,200		
Dec. 1	1,200		
Dec. 15	1,200		
Bal.	3,600		

Utilities Expense

Dec. 15	100		
Bal.	100		

$114,700 = $60,900 + $53,800

under their headings. Notice that at December 31, Smart Touch Learning has assets of $114,700 ($12,200 + $1,000 + $500 + $3,000 + $18,000 + $60,000 + $20,000), liabilities of $60,900 ($200 + $100 + $600 + $60,000), and equity of $53,800 ($48,000 − $5,000 + $16,500 − $2,000 − $3,600 − $100). The accounting equation is in balance ($114,700 = $60,900 + $53,800).

The Four-Column Account: An Alternative to the T-Account

The ledger accounts illustrated thus far appear as T-accounts, with the debits on the left and the credits on the right. The T-account clearly separates debits from credits and is used for teaching. An alternative to using the T-account is the four-column account. The four-column account still has debit and credit columns, but it also adds two additional columns that are used to determine a running balance. Exhibit 2-8 shows the Cash T-account and the Cash four-column account for Smart Touch Learning.

Exhibit 2-8 | T-Account Versus Four-Column Account

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
Dec. 21	600	5,000	Nov. 25
Dec. 28	8,000	3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15
Bal.	12,200		

The Debit or Credit for each transaction.

The balance of the account after each transaction.

On Nov. 2, the balance is calculated as $30,000 – $20,000.

CASH — Account No. 101

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Nov. 1		J1	30,000		30,000	
Nov. 2		J1		20,000	10,000	
Nov. 8		J1	5,500		15,500	
Nov. 15		J1		3,200	12,300	
Nov. 21		J1		300	12,000	
Nov. 22		J1	2,000		14,000	
Nov. 25		J1		5,000	9,000	
Dec. 1		J2		3,000	6,000	
Dec. 1		J2		1,200	4,800	
Dec. 15		J2		1,200	3,600	
Dec. 21		J2	600		4,200	
Dec. 28		J2	8,000		12,200	

The first pair of Debit/Credit columns in the four-column account is for transaction amounts posted to the account from the journal, such as the $30,000 debit. The second pair of Debit/Credit columns shows the balance of the account as of each date. Because the four-column format provides more information, it is used more often in practice than the T-account. Notice that the balance after the last transaction on December 28 is $12,200, which is the same balance calculated in the T-account.

Do you notice the column labeled *Post Ref.* in the four-column account in Exhibit 2-8? This column is used in the posting process. When the information is transferred from the journal to the ledger, a posting reference (Post Ref.) is added. This allows a user of the financial data to trace the amount in the ledger back to the journal. In a computerized system, the user would be able to click on the posting reference to view the related journal entry. Exhibit 2-9 shows the posting and associated posting references for Transaction 1 of Smart Touch Learning. Remember, in a computerized environment, this process is completed automatically when the user enters the journal entry.

Exhibit 2-9 | Posting References

The page number from the journal.

Page 1

Date	Accounts and Explanation	Post. Ref.	Debit	Credit
Nov. 1	Cash	101	30,000	
	Common Stock	301		30,000
	Issued common stock.			

The account number from the ledger.

CASH — Account No. 101

Date	Item	Post. Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Nov. 1		J1	30,000		30,000	

COMMON STOCK — Account No. 301

Date	Item	Post. Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Nov. 1		J1		30,000		30,000

Try It!

21. EMB Consulting Services had the following transactions for the month of November. Journalize the transactions and include an explanation with each entry.

Nov. 1	The business received $10,000 cash and issued common stock.
15	Purchased office supplies on account, $400.
18	Paid advertising bill, $150.
20	Received $1,000 from customers for services rendered.
28	Cash dividends of $500 were paid to stockholders.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S2-5 through S2-7. MyAccountingLab

WHAT IS THE TRIAL BALANCE?

Learning Objective 4

Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements

After the transactions are recorded in the journal and then posted to the ledger, a **trial balance** can be prepared. The trial balance summarizes the ledger by listing all the accounts with their balances—assets first, followed by liabilities, and then equity. In a manual accounting system, the trial balance provides an accuracy check by showing whether total debits equal total credits. In all types of systems, the trial balance is a useful summary of the accounts and their balances because it shows the balances on a specific date for all accounts in a company's accounting system. Exhibit 2-10 is the trial balance of Smart Touch Learning at December 31, 2018.

Trial Balance

A list of all ledger accounts with their balances at a point in time.

Exhibit 2-10 | Trial Balance

SMART TOUCH LEARNING
Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Land	20,000	
Building	60,000	
Furniture	18,000	
Accounts Payable		$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	$ 125,400	$ 125,400

The trial balance and the balance sheet are not the same. Make sure you understand the differences between these two documents. A trial balance verifies the equality of debits and credits and is an internal document used only by employees of the company. The balance sheet, on the other hand, presents the business's accounting equation and is a financial statement that can be used by both internal and external users.

Preparing Financial Statements from the Trial Balance

In addition to proving the equality of debits and credits, the trial balance is also used to prepare the financial statements. The account balances are taken directly from the trial balance and are used to prepare the income statement, statement of retained earnings, and balance sheet. In Exhibit 2-11 (on the next page), we present the financial statements for the two months ended December 31, 2018, for Smart Touch Learning.

Exhibit 2-11 | **Smart Touch Learning's Financial Statements**

SMART TOUCH LEARNING
Income Statement
Two Months Ended December 31, 2018

Revenues:		
Service Revenue		$ 16,500
Expenses:		
Salaries Expense	$ 3,600	
Rent Expense	2,000	
Utilities Expense	100	
Total Expenses		5,700
Net Income		$ 10,800

SMART TOUCH LEARNING
Statement of Retained Earnings
Two Months Ended December 31, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the two months	10,800
	10,800
Dividends	(5,000)
Retained Earnings, December 31, 2018	$ 5,800

SMART TOUCH LEARNING
Balance Sheet
December 31, 2018

Assets		Liabilities	
Cash	$ 12,200	Accounts Payable	$ 200
Accounts Receivable	1,000	Utilities Payable	100
Office Supplies	500	Unearned Revenue	600
Prepaid Rent	3,000	Notes Payable	60,000
Land	20,000	Total Liabilities	60,900
Building	60,000		
Furniture	18,000	**Stockholders' Equity**	
		Common Stock	48,000
		Retained Earnings	5,800
		Total Stockholders' Equity	53,800
Total Assets	$ 114,700	Total Liabilities and Stockholders' Equity	$ 114,700

Correcting Trial Balance Errors

Throughout the accounting process, total debits should always equal total credits. If they do not, there is an error. Computerized accounting systems eliminate many errors because most software will not let you make a journal entry that does not balance. But computers cannot *eliminate* all errors because humans can input the wrong data.

Balancing errors can be detected by computing the difference between total debits and total credits on the trial balance. Then perform one or more of the following actions:

1. **Search the trial balance for a missing account.** For example, suppose the accountant omitted the Dividends account from the trial balance in Exhibit 2-10. Total debits would then be $120,400 ($125,400 − $5,000). Trace each account from the ledger to the trial balance, and you will locate the missing account.
2. **Divide the difference between total debits and total credits by 2.** A debit treated as a credit, or vice versa, doubles the amount of the error. Suppose the accountant posted a $500 credit as a debit. Total debits contain the $500, and total credits omit the $500. The out-of-balance amount is $1,000. Dividing the difference by 2 identifies the $500

amount of the transaction. Then search the journal or ledger for a $500 transaction and trace it to the account affected.

3. **Divide the out-of-balance amount by 9.** If the result is evenly divisible by 9, the error may be a *slide error* (example: writing $1,000 as $100 or writing $100 as $1,000) or a *transposition* (example: listing $1,200 as $2,100). Suppose, for example, that the accountant entered the $5,000 Dividends as $50,000 on the trial balance. This is a slide error. Total debits would differ from total credits by $45,000 ($50,000 − $5,000 = $45,000). Dividing $45,000 by 9 yields $5,000, the correct amount of the dividends. Look for an account in the ledger with a $5,000 balance until you reach the Dividends account. You have then found the error.

Total debits can equal total credits on the trial balance; however, there still could be errors in individual account balances because an incorrect account might have been selected in an individual journal entry.

Try It!

22. Using the following accounts and their balances, prepare the trial balance for Cooper Furniture Repair as of December 31, 2018. All accounts have normal balances.

Cash	$ 7,000	Advertising Expense	$ 1,200
Unearned Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Common Stock	12,200	Dividends	3,000

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S2-8. MyAccountingLab

HOW DO YOU USE THE DEBT RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5
Use the debt ratio to evaluate business performance

Previously you learned that evaluating a company's return on assets (Net income / Average total assets) can help in determining how well a company is performing. In this chapter, you learn about another tool that can be used when reviewing financial statements. The **debt ratio** shows the proportion of assets financed with debt and is calculated by dividing total liabilities by total assets. It can be used to evaluate a business's ability to pay its debts.

Debt Ratio
Shows the proportion of assets financed with debt. Total liabilities / Total assets.

$$\text{Debt ratio} = \text{Total liabilities} / \text{Total assets}$$

Think about the accounting equation (Assets = Liabilities + Equity). The equation shows who can claim the assets. The liabilities represent the claims of the creditors, and the equity represents the claims of the stockholders. Companies that have a high percentage of liabilities are at greater risk of default. If they are unable to pay their creditors as the amounts become due, the creditors have the right to claim the assets. The debt ratio calculates the percentage of assets that are financed with liabilities.

Let's look at **Kohl's Corporation** and evaluate its ability to pay its debts. On its January 30, 2016, balance sheet (a link is located online at http://www.pearsonhighered.com/Horngren), Kohl's reported (in millions) total liabilities of \$8,115 (\$2,714 + \$2,792 + \$1,789 + \$257 + \$563) and total assets of \$13,606. The debt ratio for Kohl's as of January 30, 2016, follows:

$$\begin{aligned}\text{Debt ratio} &= \text{Total liabilities / Total assets}\\ &= \$8{,}115 / \$13{,}606\\ &= 0.596 = 59.6\%^*\end{aligned}$$

*rounded

A debt ratio of 59.6% means that more than half, approximately sixty percent, of the assets of Kohl's Corporation are financed with debt. The other 40.4% (100% − 59.6%) are financed by stockholders of the corporation. The debt ratio indicates the risk of a company. The higher the debt ratio, the higher the risk. All liabilities must eventually be paid, and the debt ratio is one indication of the ability of the company to fulfill these obligations.

DECISIONS

Would you purchase equipment with debt?

Jackson Russell works as a district sales manager for a large pharmaceutical sales company. Jackson would like to purchase a new high-tech marketing display that he will be able to use at upcoming medical conferences. The marketing display will allow his customers to access up-to-date information and research statistics on the pharmaceuticals that his company sells by using multiple touch screen computers. He believes that the marketing display will significantly increase the sales revenue of the products he sells. The only problem is that the marketing display will cost \$50,000, and he does not have the cash in his budget to purchase the display. Jackson will need to purchase the display using debt, which will increase the district's debt ratio from 20% to 58%. Jackson is aware that his company closely monitors the district's debt ratio and has a policy that the district must maintain a ratio below 55%. Should Jackson purchase the equipment?

Solution

If the company has a policy that the district's debt ratio must remain below 55%, then Jackson should not purchase the equipment. However, there might be a way to structure the purchase so that the district's debt ratio would stay below 55%. Jackson either needs to incur less debt or increase his total assets. He could do this in several possible ways. One alternative might be for Jackson to pay for part of the display equipment with cash and only finance part of it with debt. Even putting as little as \$10,000 cash down on the equipment would keep the debt ratio below 55%. Another alternative might be for his district to recognize revenue. If there are open sales opportunities that his employees could close, they might be able to increase total assets (and revenue) and, thereby, decrease the debt ratio.

Try It!

23. Using the following accounts and their balances, calculate the debt ratio for Cooper Furniture Repair as of December 31.

Cash	\$ 7,000	Advertising Expense	\$ 1,200
Unearned Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Common Stock	12,200	Dividends	3,000

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S2-9. MyAccountingLab

REVIEW

> Things You Should Know

1. What is an account?

- An account is a detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period.
- Common asset accounts: Cash, Accounts Receivable, Notes Receivable, Prepaid Expenses, Land, Building, Furniture
- Common liability accounts: Accounts Payable, Notes Payable, Taxes Payable, Salaries Payable, Unearned Revenue
- Common equity accounts: Common Stock, Dividends, Revenues, Expenses
- A chart of accounts lists a company's accounts along with account numbers.
- A ledger shows the increases and decreases in each account along with their balances.

2. What is double-entry accounting?

- Double-entry accounting requires transactions to be recorded into at least two accounts.
- The T-account is shaped like a capital *T* with debits posted to the left side of the vertical line and credits posted to the right side of the vertical line.
- Debit = Left
- Credit = Right
- Assets, Dividends, and Expenses are increased with a debit and decreased with a credit.
- Liabilities, Common Stock, and Revenues are increased with a credit and decreased with a debit.
- The normal balance of an account is the increase side of an account.

3. How do you record transactions?

- Source documents provide the evidence and data for transactions.
- Transactions are recorded in a journal, and then the journal entries are posted (transferred) to the ledger.
- Transactions are journalized and posted using five steps:

Step 1: Identify the accounts and the account type.

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits.

Step 3: Record the transaction in the journal.

Step 4: Post the journal entry to the ledger.

Step 5: Determine whether the accounting equation is in balance.

4. What is the trial balance?

- The trial balance summarizes the ledger by listing all the accounts with their balances.
- Assets are listed first, followed by liabilities, and then equity.
- The trial balance ensures that debits equal credits and is used to prepare the financial statements.

5. How do you use the debt ratio to evaluate business performance?

- The debt ratio can be used to evaluate a business's ability to pay its debts.
- Debt ratio = Total liabilities / Total assets.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The trial balance of Harper Service Center as of March 31, 2018, follows:

HARPER SERVICE CENTER
Trial Balance
March 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 23,900	
Accounts Receivable	4,500	
Office Supplies	0	
Land	0	
Accounts Payable		$ 2,000
Utilities Payable		0
Unearned Revenue		0
Notes Payable		0
Common Stock		18,500
Dividends	0	
Service Revenue		10,000
Salaries Expense	800	
Rent Expense	1,000	
Interest Expense	0	
Utilities Expense	300	
Total	$ 30,500	$ 30,500

During April, the business engaged in the following transactions:

Apr. 2	Borrowed $45,000 from the bank and signed a note payable in the name of the business.
4	Paid cash of $40,000 to acquire land.
9	Performed services for a customer and received cash of $5,000.
13	Purchased office supplies on account, $300.
15	Performed services for a customer on account, $2,600.
18	Paid $1,200 on account.
21	Paid the following cash expenses: salaries, $3,000; rent, $1,500; and interest, $400.
25	Received $3,100 from a customer on account.
27	Received a $200 utility bill that will be paid next month.
29	Received $1,500 for services to be performed next month.
30	Cash dividends of $1,800 were paid to stockholders.

Requirements

1. Open the accounts listed in the trial balance using the balances indicated. Use the T-account format. (See Learning Objective 2)
2. Journalize each transaction including explanations. (See Learning Objective 3)
3. Post the journal entries to the ledger (use T-account format). (See Learning Objective 3)
4. Prepare the trial balance of Harper Service Center as of April 30, 2018. (See Learning Objective 4)

> Solution

Requirement 1

ASSETS	=	LIABILITIES	+	EQUITY						
				Contributed Capital	+	Retained Earnings				
Cash	=	**Accounts Payable**	+	**Common Stock**	−	**Dividends**	+	**Service Revenue**	−	**Salaries Expense**
Bal. 23,900 |		| 2,000 Bal.		| 18,500 Bal.		Bal. 0 |		| 10,000 Bal.		Bal. 800 |
Accounts Receivable		**Utilities Payable**								**Rent Expense**
Bal. 4,500 |		| 0 Bal.								Bal. 1,000 |
Office Supplies		**Unearned Revenue**								**Interest Expense**
Bal. 0 |		| 0 Bal.								Bal. 0 |
Land		**Notes Payable**								**Utilities Expense**
Bal. 0 |		| 0 Bal.								Bal. 300 |

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Apr. 2	Cash	45,000	
	Notes Payable		45,000
	Borrowed cash on notes payable.		
4	Land	40,000	
	Cash		40,000
	Purchased land with cash.		
9	Cash	5,000	
	Service Revenue		5,000
	Performed services and received cash.		
13	Office Supplies	300	
	Accounts Payable		300
	Purchased office supplies on account.		
15	Accounts Receivable	2,600	
	Service Revenue		2,600
	Performed services on account.		
18	Accounts Payable	1,200	
	Cash		1,200
	Paid cash on account.		
21	Salaries Expense	3,000	
	Rent Expense	1,500	
	Interest Expense	400	
	Cash		4,900
	Paid cash expenses.		
25	Cash	3,100	
	Accounts Receivable		3,100
	Received cash on account.		
27	Utilities Expense	200	
	Utilities Payable		200
	Received utility bill.		
29	Cash	1,500	
	Unearned Revenue		1,500
	Collected cash for future services.		
30	Dividends	1,800	
	Cash		1,800
	Paid dividends.		

Requirement 3

ASSETS = LIABILITIES + EQUITY

EQUITY: Contributed Capital + Retained Earnings

Cash = Accounts Payable + Common Stock − Dividends + Service Revenue − Salaries Expense

Cash

Bal.	23,900	40,000	Apr. 4
Apr. 2	45,000	1,200	Apr. 18
Apr. 9	5,000	4,900	Apr. 21
Apr. 25	3,100	1,800	Apr. 30
Apr. 29	1,500		
Bal.	30,600		

Accounts Receivable

Bal.	4,500	3,100	Apr. 25
Apr. 15	2,600		
Bal.	4,000		

Office Supplies

Bal.	0		
Apr. 13	300		
Bal.	300		

Land

Bal.	0		
Apr. 4	40,000		
Bal.	40,000		

Accounts Payable

Apr. 18	1,200	2,000	Bal.
		300	Apr. 13
		1,100	Bal.

Utilities Payable

		0	Bal.
		200	Apr. 27
		200	Bal.

Unearned Revenue

		0	Bal.
		1,500	Apr. 29
		1,500	Bal.

Notes Payable

		0	Bal.
		45,000	Apr. 2
		45,000	Bal.

Common Stock

		18,500	Bal.
		18,500	Bal.

Dividends

Bal.	0		
Apr. 30	1,800		
Bal.	1,800		

Service Revenue

		10,000	Bal.
		5,000	Apr. 9
		2,600	Apr. 15
		17,600	Bal.

Salaries Expense

Bal.	800		
Apr. 21	3,000		
Bal.	3,800		

Rent Expense

Bal.	1,000		
Apr. 21	1,500		
Bal.	2,500		

Interest Expense

Bal.	0		
Apr. 21	400		
Bal.	400		

Utilities Expense

Bal.	300		
Apr. 27	200		
Bal.	500		

Requirement 4

HARPER SERVICE CENTER
Trial Balance
April 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 30,600	
Accounts Receivable	4,000	
Office Supplies	300	
Land	40,000	
Accounts Payable		$ 1,100
Utilities Payable		200
Unearned Revenue		1,500
Notes Payable		45,000
Common Stock		18,500
Dividends	1,800	
Service Revenue		17,600
Salaries Expense	3,800	
Rent Expense	2,500	
Interest Expense	400	
Utilities Expense	500	
Total	$ 83,900	$ 83,900

> Key Terms

Account (p. 57)
Accrued Liability (p. 58)
Chart of Accounts (p. 59)
Compound Journal Entry (p. 70)
Credit (p. 61)
Debit (p. 61)
Debt Ratio (p. 81)
Double-Entry System (p. 61)
Journal (p. 65)
Ledger (p. 60)
Normal Balance (p. 62)
Notes Payable (p. 58)
Notes Receivable (p. 58)
Posting (p. 65)
Prepaid Expense (p. 58)
Source Document (p. 64)
T-Account (p. 61)
Trial Balance (p. 79)
Unearned Revenue (p. 58)

> Quick Check

Learning Objective 1

1. The detailed record of the changes in a particular asset, liability, or stockholders' equity is called

a. an account.
b. a journal.
c. a ledger.
d. a trial balance.

Learning Objective 1

2. Which of the following accounts is a liability?

a. Accounts Receivable
b. Service Revenue
c. Unearned Revenue
d. Prepaid Rent Expense

Learning Objective 2

3. The left side of an account is used to record which of the following?

a. Debit or credit, depending on the type of account
b. Increases
c. Credits
d. Debits

Learning Objective 2

4. Which of the following statements is correct?

a. Prepaid Expenses are decreased with a debit.
b. Unearned Revenue is increased with a debit.
c. Rent Expense is increased with a credit.
d. Accounts Payable is increased with a credit.

Learning Objective 3

5. Your business purchased office supplies of $2,500 on account. The journal entry to record this transaction is as follows:

Date	Accounts and Explanation	Debit	Credit
a.	Office Supplies	2,500	
	Accounts Receivable		2,500
b.	Office Supplies	2,500	
	Accounts Payable		2,500
c.	Accounts Payable	2,500	
	Office Supplies		2,500
d.	Cash	2,500	
	Accounts Payable		2,500

Learning Objective 3

6. Sedlor Properties purchased office supplies on account for $800. Which journal entry records the payment on account of those office supplies?

Date	Accounts and Explanation	Debit	Credit
a.	Accounts Payable	800	
	Accounts Receivable		800
b.	Accounts Payable	800	
	Cash		800
c.	Cash	800	
	Accounts Payable		800
d.	Office Supplies	800	
	Cash		800

Learning Objective 3

7. Posting a $2,500 purchase of office supplies on account appears as follows:

a.

Cash	
	2,500

Office Supplies	
2,500	

b.

Office Supplies	
	2,500

Accounts Payable	
2,500	

c.

Office Supplies	
2,500	

Accounts Receivable	
	2,500

d.

Office Supplies	
2,500	

Accounts Payable	
	2,500

Learning Objective 4

8. Pixel Copies recorded a cash collection on account by debiting Cash and crediting Accounts Payable. What will the trial balance show for this error?

a. Cash is overstated
b. Liabilities are overstated
c. Expenses are overstated
d. The trial balance will not balance

Learning Objectives 3, 4

9. Which sequence correctly summarizes the accounting process?

a. Journalize transactions, post to the accounts, prepare a trial balance
b. Journalize transactions, prepare a trial balance, post to the accounts
c. Post to the accounts, journalize transactions, prepare a trial balance
d. Prepare a trial balance, journalize transactions, post to the accounts

Learning Objective 5

10. Nathville Laundry reported assets of $800 and equity of $480. What is Nathville's debt ratio?

a. 60%
b. 40%
c. 67%
d. Not enough information is provided

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. Identify the three categories of the accounting equation, and list at least four accounts associated with each category.
2. What is the purpose of the chart of accounts? Explain the numbering typically associated with the accounts.
3. What does a ledger show? What's the difference between a ledger and the chart of accounts?
4. Accounting uses a double-entry system. Explain what this sentence means.
5. What is a T-account? On which side is the debit? On which side is the credit? Where does the account name go on a T-account?
6. When are debits increases? When are debits decreases?
7. When are credits increases? When are credits decreases?
8. Identify which types of accounts have a normal debit balance and which types of accounts have a normal credit balance.
9. What are source documents? Provide examples of source documents that a business might use.
10. Where are transactions initially recorded?
11. Explain the five steps in journalizing and posting transactions.
12. What are the four parts of a journal entry?
13. What is involved in the posting process?
14. What is the purpose of the trial balance?
15. What is the difference between the trial balance and the balance sheet?
16. If total debits equal total credits on the trial balance, is the trial balance error-free? Explain your answer.
17. What is the calculation for the debt ratio? Explain what the debt ratio evaluates.

> Short Exercises

Learning Objective 1

S2-1 Identifying accounts

Consider the following accounts and identify each account as an asset (A), liability (L), or equity (E).

a. Notes Receivable
b. Common Stock
c. Prepaid Insurance
d. Notes Payable
e. Rent Revenue
f. Taxes Payable
g. Rent Expense
h. Furniture
i. Dividends
j. Unearned Revenue

S2-2 Identifying increases and decreases in accounts

Learning Objective 2

For each account, identify whether the changes would be recorded as a debit (DR) or credit (CR).

a. Increase to Accounts Receivable
b. Decrease to Unearned Revenue
c. Decrease to Cash
d. Increase to Interest Expense
e. Increase to Salaries Payable
f. Decrease to Prepaid Rent
g. Increase to Common Stock
h. Increase to Notes Receivable
i. Decrease to Accounts Payable
j. Increase to Interest Revenue

S2-3 Identifying normal balances

Learning Objective 2

For each account, identify whether the normal balance is a debit (DR) or credit (CR).

a. Notes Payable
b. Dividends
c. Service Revenue
d. Land
e. Unearned Revenue
f. Common Stock
g. Utilities Expense
h. Office Supplies
i. Advertising Expense
j. Interest Payable

S2-4 Calculating the balance of a T-account

Learning Objective 2

Accounts Payable

May 2	6,000	21,000	May 1
May 22	11,500	500	May 5
		8,500	May 15
		500	May 23

Calculate the Accounts Payable balance.

S2-5 Journalizing transactions

Learning Objective 3

John Daniel opened a medical practice in Sacramento, California, and had the following transactions during the month of January.

Jan. 1	The business received $34,000 cash and issued common stock to Daniel.
2	Purchased medical supplies on account, $17,000.
4	Performed services for patients receiving $1,600.
12	Paid monthly office rent of $3,000.
15	Recorded $7,000 revenue for services rendered to patients on account.

Journalize the transactions of John Daniel, M.D. Include an explanation with each entry.

CHAPTER 2

Learning Objective 3

S2-6 Journalizing transactions

Harper Sales Consultants completed the following transactions during the latter part of January:

Jan. 22	Performed services for customers on account, $7,500.
30	Received cash on account from customers, $8,000.
31	Received a utility bill, $220, which will be paid during February.
31	Paid monthly salary to salesman, $2,500.
31	Received $2,310 for three months of consulting service to be performed starting in February.
31	Cash dividends of $950 were paid to stockholders.

Journalize the transactions of Harper Sales Consultants. Include an explanation with each journal entry.

Learning Objective 3

S2-7 Journalizing transactions and posting to T-accounts

Roland Foster Optical Dispensary completed the following transactions during the latter part of March:

Mar. 15	Purchased office supplies on account, $3,400.
28	Paid $1,800 on account.

Requirements

1. Journalize the transactions of Roland Foster Optical Dispensary. Include an explanation with each journal entry.
2. Open the following accounts (use T-account format): Cash (Beginning Balance of $21,000), Office Supplies, and Accounts Payable. Post the journal entries from Requirement 1 to the accounts, and compute the balance in each account.

Learning Objective 4

S2-8 Preparing a trial balance

Smithson Floor Coverings reported the following summarized data at December 31, 2018. Accounts appear in no particular order, and all have normal balances.

Service Revenue	$ 26,000	Salaries Payable	$ 25,000
Equipment	36,000	Salaries Expense	1,600
Rent Expense	17,000	Cash	7,000
Common Stock	24,000	Accounts Receivable	3,600
Accounts Payable	2,200	Interest Payable	6,000
Dividends	16,100	Utilities Expense	1,900

Prepare the trial balance of Smithson Floor Coverings at December 31, 2018.

Learning Objective 5

S2-9 Calculating debt ratio

Aladdin Carpet Care had the following total assets, liabilities, and equity as of October 31:

Assets	$ 200,000
Liabilities	30,000
Equity	170,000

What is Aladdin Carpet Care's debt ratio as of October 31?

> Exercises

E2-10 Using accounting vocabulary

Learning Objectives 1, 2, 3, 4

Match the accounting terms with the corresponding definitions.

1. Posting	**a.** A detailed record of all increases and decreases that have occurred in a particular asset, liability, or equity during a period
2. Account	**b.** The record holding all the accounts of a business, the changes in those accounts, and their balances
3. Debit	**c.** A journal entry that is characterized by having multiple debits and/or multiple credits
4. Journal	**d.** A record of transactions in date order
5. Chart of accounts	**e.** Left side of a T-account
6. Trial balance	**f.** Side of an account where increases are recorded
7. Normal balance	**g.** Transferring amounts from the journal to the ledger
8. Ledger	**h.** Right side of a T-account
9. Credit	**i.** A list of all accounts with their balances at a point in time
10. Compound journal entry	**j.** A list of all accounts with their account numbers

E2-11 Creating a chart of accounts

Learning Objective 1

Raymond Autobody Shop has the following accounts:

Accounts Payable	Service Revenue
Cash	Equipment
Utilities Expense	Common Stock
Automotive Supplies	Advertising Expense
Dividends	Unearned Revenue
Retained Earnings	

Create a chart of accounts for Raymond Autobody Shop using the standard numbering system. Each account is separated by a factor of 10. For example, the first asset account will be 100 and the next asset account will 110.

E2-12 Identifying accounts, increases in accounts, and normal balances

Learning Objectives 1, 2

a. Interest Revenue
b. Accounts Payable
c. Common Stock
d. Office Supplies
e. Advertising Expense
f. Unearned Revenue
g. Prepaid Rent
h. Utilities Expense
i. Dividends
j. Service Revenue

Requirements

1. Identify each account as asset (A), liability (L), or equity (E).
2. Identify whether the account is increased with a debit (DR) or credit (CR).
3. Identify whether the normal balance is a debit (DR) or credit (CR).

Learning Objective 2

E2-13 Identifying increases and decreases in accounts and normal balances

Insert the missing information into the accounting equation. Signify increases as Incr. and decreases as Decr.

(a)		=	LIABILITIES		+	(b)										
						Contributed Capital		+	Retained Earnings							
ASSETS		=	(c)		+	Common Stock		−	(d)		+	Revenues		−	Expenses	
(e) Debit	Decr. (n)		Decr. (o)	(f) Credit		(g) (p)	(h) Credit		(i) (q)	(j) Credit		(k) Debit	(l) Credit		Incr. (r)	(m) Credit

Learning Objective 3

E2-14 Identifying source documents

For each transaction, identify a possible source document.

a. The business received $20,000 cash and issued common stock to stockholders.

b. Purchased office supplies on account, $500.

c. Recorded $1,000 revenue for services rendered to customers.

Learning Objective 3

E2-15 Analyzing and journalizing transactions

As the manager of Margarita Mexican Restaurant, you must deal with a variety of business transactions. Provide an explanation for the following transactions:

a. Debit Equipment and credit Cash.

b. Debit Dividends and credit Cash.

c. Debit Wages Payable and credit Cash.

d. Debit Equipment and credit Common Stock.

e. Debit Cash and credit Unearned Revenue.

f. Debit Advertising Expense and credit Cash.

g. Debit Cash and credit Service Revenue.

Use the following information to answer Exercises E2-16 and E2-17.

The following transactions occurred for Lawrence Engineering:

Jul. 2	Received $14,000 contribution from Brett Lawrence in exchange for common stock.
4	Paid utilities expense of $370.
5	Purchased equipment on account, $1,600.
10	Performed services for a client on account, $2,900.
12	Borrowed $7,100 cash, signing a notes payable.
19	Cash dividends of $200 were paid to stockholders.
21	Purchased office supplies for $840 and paid cash.
27	Paid the liability from July 5.

E2-16 Analyzing and journalizing transactions

Learning Objective 3

Journalize the transactions of Lawrence Engineering. Include an explanation with each journal entry. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Equipment; Accounts Payable; Notes Payable; Common Stock; Dividends; Service Revenue; and Utilities Expense.

E2-17 Posting journal entries to T-accounts

Learning Objective 3

3. Cash Balance $18,090

Requirements

1. Open the following T-accounts for Lawrence Engineering: Cash; Accounts Receivable; Office Supplies; Equipment; Accounts Payable; Notes Payable; Common Stock; Dividends; Service Revenue; and Utilities Expense.
2. Post the journal entries to the T-accounts. Also transfer the dates to the T-accounts.
3. Compute the July 31 balance for each account.

Use the following information to answer Exercises E2-18 and E2-19.

The following transactions occurred for Wilke Technology Solutions:

May 1	The business received cash of $105,000 and issued common stock to Zoe Wilke.
2	Purchased office supplies on account, $550.
4	Paid $57,000 cash for building and land. The building had a fair market value of $45,000.
6	Performed services for customers and received cash, $3,600.
9	Paid $350 on accounts payable.
17	Performed services for customers on account, $3,500.
19	Paid rent expense for the month, $1,200.
20	Received $1,500 from customers for services to be performed next month.
21	Paid $900 for advertising in next month's *IT Technology* magazine.
23	Received $3,100 cash on account from a customer.
31	Incurred and paid salaries, $1,700.

E2-18 Analyzing and journalizing transactions

Learning Objective 3

Journalize the transactions of Wilke Technology Solutions. Include an explanation with each journal entry. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Advertising; Land; Building; Accounts Payable; Unearned Revenue; Common Stock; Service Revenue; Rent Expense; and Salaries Expense.

E2-19 Posting journal entries to four-column accounts

Learning Objective 3

2. Cash Balance $52,050

Requirements

1. Open four-column accounts using the following account numbers: Cash, 110; Accounts Receivable, 120; Office Supplies, 130; Prepaid Advertising, 140; Land, 150; Building, 160; Accounts Payable, 210; Unearned Revenue, 220; Common Stock, 310; Service Revenue, 410; Rent Expense, 510; and Salaries Expense, 520.
2. Post the journal entries to the four-column accounts, and determine the balance in the account after each transaction. Assume that the journal entries were recorded on page 10 of the journal. Make sure to complete the Post. Ref. columns in the journal and ledger.

Learning Objective 3

E2-20 Analyzing transactions from T-accounts

The first nine transactions of North-West Airplane Repair have been posted to the T-accounts. Provide an explanation for each of the nine transactions.

ASSETS = LIABILITIES + EQUITY

EQUITY: Contributed Capital + Retained Earnings

Cash = Accounts Payable + Common Stock − Dividends + Service Revenue − Rent Expense

Cash

(1)	370,000	360,000	(2)
(3)	260,000	1,200	(5)
(9)	21,000	1,500	(6)
		3,900	(7)
		7,000	(8)

Office Supplies

(4)	1,500	

Building

(2)	360,000	

Accounts Payable

(5)	1,200	1,500	(4)

Notes Payable

	260,000	(3)

Common Stock

	370,000	(1)

Dividends

(8)	7,000	

Service Revenue

	21,000	(9)

Rent Expense

(7)	1,400	

Salaries Expense

(7)	2,500	

Property Tax Expense

(6)	1,500	

Learning Objective 3

E2-21 Journalizing transactions from T-accounts

In December 2018, the first five transactions of Abling's Lawn Care Company have been posted to the T-accounts. Prepare the journal entries that served as the sources for the five transactions. Include an explanation for each entry.

Cash

(1)	57,000	40,000	(3)
(4)	46,000	3,800	(5)

Office Supplies

(2)	800	

Building

(3)	40,000	

Equipment

(5)	3,800	

Accounts Payable

	800	(2)

Notes Payable

	46,000	(4)

Common Stock

	57,000	(1)

Learning Objective 4

Total Debits $191,800

E2-22 Preparing a trial balance

The accounts of Anderson Moving Company follow with their normal balances as of August 31, 2018. The accounts are listed in no particular order.

Common Stock	$ 49,800	Trucks	$ 123,000
Insurance Expense	600	Fuel Expense	1,000
Accounts Payable	4,000	Dividends	5,600
Service Revenue	82,000	Utilities Expense	300
Building	41,000	Accounts Receivable	10,000
Advertising Expense	200	Notes Payable	56,000
Salaries Expense	6,000	Office Supplies	100
Cash	4,000		

Prepare Anderson's trial balance as of August 31, 2018.

E2-23 Preparing a trial balance from T-accounts

Learning Objective 4

Total Debits $80,700

The T-accounts of McMahon Farm Equipment Repair follow as of May 31, 2018.

ASSETS = LIABILITIES + EQUITY

EQUITY = Contributed Capital + Retained Earnings

Cash = Salaries Payable + Common Stock − Dividends + Service Revenue − Salaries Expense

ASSETS

Cash	
31,000	14,000
1,800	800
400	4,000
	2,000
	3,380

Accounts Receivable	
3,500	400

Land	
14,000	

Building	
29,000	

Equipment	
16,000	

LIABILITIES

Salaries Payable	
800	4,200

Notes Payable	
4,000	29,000

EQUITY

Contributed Capital

Common Stock	
	31,000
	16,000

Retained Earnings

Dividends	
2,000	

Service Revenue	
	3,500
	1,800

Salaries Expense	
2,100	
4,200	

Property Tax Expense	
1,000	

Advertising Expense	
280	

Prepare McMahon Farm Equipment Repair's trial balance as of May 31, 2018.

E2-24 Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

Learning Objectives 3, 4

3. Total Debits $24,670

The following transactions occurred during the month for Teresa Parker, CPA:

Jun. 1	Parker opened an accounting firm by contributing $13,200 cash and office furniture with a fair market value of $5,300 in exchange for common stock.
5	Paid monthly rent of $1,300.
9	Purchased office supplies on account, $600.
14	Paid employee's salary, $1,900.
18	Received a bill for utilities to be paid next month, $370.
21	Paid $500 of the accounts payable created on June 9.
25	Performed accounting services on account, $5,700.
28	Paid cash dividends of $6,700.

Requirements

1. Open the following four-column accounts of Teresa Parker, CPA: Cash, 110; Accounts Receivable, 120; Office Supplies, 130; Office Furniture, 140; Accounts Payable, 210; Utilities Payable, 220; Common Stock, 310; Dividends, 320; Service Revenue, 410; Salaries Expense, 510; Rent Expense, 520; and Utilities Expense, 530.
2. Journalize the transactions, and then post the journal entries to the four-column accounts. Explanations are not required for the journal entries. Keep a running balance in each account. Assume the journal entries are recorded on page 10 of the journal.
3. Prepare the trial balance as of June 30, 2018.

CHAPTER 2

Learning Objective 4

E2-25 Analyzing accounting errors

Courtney Meehan has trouble keeping her debits and credits equal. During a recent month, Courtney made the following accounting errors:

a. In preparing the trial balance, Courtney omitted a $5,000 Notes Payable. The debit to Cash was correct.

b. Courtney posted a $1,000 Utilities Expense as $100. The credit to Cash was correct.

c. In recording a $600 payment on account, Courtney debited Furniture instead of Accounts Payable.

d. In journalizing a receipt of cash for service revenue, Courtney debited Cash for $50 instead of the correct amount of $500. The credit was correct.

e. Courtney recorded a $210 purchase of office supplies on account by debiting Office Supplies for $120 and crediting Accounts Payable for $120.

Requirements

1. For each of these errors, state whether total debits equal total credits on the trial balance.
2. Identify each account that has an incorrect balance and the amount and direction of the error (e.g., "Accounts Receivable $500 too high").

Learning Objective 4

Total Debits $35,600

E2-26 Correcting errors in a trial balance

The accountant for Countryside Painting Specialists is having a hard time preparing the trial balance as of November 30, 2018:

COUNTRYSIDE PAINTING SPECIALISTS
Trial Balance
November 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Painting Equipment	$ 13,500	
Cash	12,100	
Accounts Receivable	1,300	
Advertising Expense	550	
Dividends		$ 3,500
Accounts Payable		3,300
Rent Expense	1,800	
Common Stock	15,000	
Service Revenue		15,600
Unearned Revenue	1,700	
Salaries Expense	2,400	
Office Supplies		200
Utilities Expense	250	
Total	$ 48,600	$ 22,600

Prepare the corrected trial balance as of November 30, 2018. Assume all amounts are correct and all accounts have normal balances.

Learning Objective 4

Total Debits $35,300

E2-27 Correcting errors in a trial balance

The following trial balance of Joy McDowell Tutoring Service as of May 31, 2018, does not balance.

JOY MCDOWELL TUTORING SERVICE Trial Balance May 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 2,800	
Accounts Receivable	2,000	
Office Supplies	600	
Computer Equipment	15,800	
Accounts Payable		$ 11,100
Utilities Payable		800
Common Stock		11,600
Dividends	10,400	
Service Revenue		9,600
Salaries Expense	1,900	
Rent Expense	800	
Utilities Expense	700	
Total	$ 35,000	$ 33,100

Investigation of the accounting records reveals that the bookkeeper:

a. Recorded a $400 cash revenue transaction by debiting Accounts Receivable. The credit entry was correct.

b. Posted a $2,000 credit to Accounts Payable as $200.

c. Did not record Utilities Expense or the related Utilities Payable in the amount of $300.

d. Understated Common Stock by $100.

Prepare the corrected trial balance as of May 31, 2018, complete with a heading; journal entries are not required.

Learning Objective 5

Total Assets $174,900

E2-28 Calculating the debt ratio

John Hart, M.D., reported the following trial balance as of September 30, 2018:

JOHN HART M.D. Trial Balance September 30, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 30,000	
Accounts Receivable	7,900	
Office Supplies	3,000	
Land	29,000	
Building	75,000	
Office Equipment	30,000	
Accounts Payable		$ 1,600
Utilities Payable		800
Unearned Revenue		24,795
Notes Payable		69,000
Common Stock		110,000
Dividends	57,000	
Service Revenue		50,505
Salaries Expense	23,500	
Utilities Expense	1,100	
Advertising Expense	200	
Total	$ 256,700	$ 256,700

Calculate the debt ratio for John Hart, M.D.

> Problems Group A

P2-29A Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Learning Objectives 3, 4

2. Cash Balance $56,050

Vince York practices medicine under the business title Vince York, M.D. During July, the medical practice completed the following transactions:

Jul. 1	York contributed $63,000 cash to the business in exchange for common stock.
5	Paid monthly rent on medical equipment, $510.
9	Paid $23,000 cash to purchase land to be used in operations.
10	Purchased office supplies on account, $1,600.
19	Borrowed $22,000 from the bank for business use.
22	Paid $1,100 on account.
28	The business received a bill for advertising in the daily newspaper to be paid in August, $240.
31	Revenues earned during the month included $6,400 cash and $6,000 on account.
31	Paid employees' salaries $2,200, office rent $1,900, and utilities $560. Record as a compound entry.
31	The business received $1,120 for medical screening services to be performed next month.
31	Paid cash dividends of $7,200.

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Accounts Payable; Advertising Payable; Unearned Revenue; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; and Advertising Expense.

Requirements

1. Journalize each transaction. Explanations are not required.
2. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal*.
3. Prepare the trial balance of Vince York, M.D., as of July 31, 2018.

Learning Objectives 3, 4

4. Total Debits $58,300

P2-30A Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Ann Simpson started her practice as a design consultant on September 1, 2018. During the first month of operations, the business completed the following transactions:

Sep. 1	Received $48,000 cash and issued common stock to Simpson.
4	Purchased office supplies, $1,200, and furniture, $1,300, on account.
6	Performed services for a law firm and received $1,900 cash.
7	Paid $18,000 cash to acquire land to be used in operations.
10	Performed services for a hotel and received its promise to pay the $1,200 within one week.
14	Paid for the furniture purchased on September 4 on account.
15	Paid assistant's semimonthly salary, $1,500.
17	Received cash on account, $1,000.
20	Prepared a design for a school on account, $650.
25	Received $2,100 cash for design services to be performed in October.
28	Received $2,900 cash for consulting with Plummer & Gordon.
29	Paid $600 cash for a 12-month insurance policy starting on October 1.
30	Paid assistant's semimonthly salary, $1,500.
30	Paid monthly rent expense, $600.
30	Received a bill for utilities, $350. The bill will be paid next month.
30	Paid cash dividends of $3,700.

Requirements

1. Record each transaction in the journal using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Furniture; Accounts Payable; Utilities Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal.*
4. Prepare the trial balance of Ann Simpson, Designer, as of September 30, 2018.

P2-31A Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

Learning Objectives 3, 4

3. Cash Balance $50,160

Terrence Murphy opened a law office on January 1, 2018. During the first month of operations, the business completed the following transactions:

Jan.	1	Murphy contributed $78,000 cash to the business, Terrence Murphy, Attorney. The business issued common stock to Murphy.
	3	Purchased office supplies, $600, and furniture, $1,700, on account.
	4	Performed legal services for a client and received $1,000 cash.
	7	Purchased a building with a market value of $130,000, and land with a market value of $25,000. The business paid $25,000 cash and signed a note payable to the bank for the remaining amount.
	11	Prepared legal documents for a client on account, $400.
	15	Paid assistant's semimonthly salary, $1,120.
	16	Paid for the office supplies purchased on January 3 on account.
	18	Received $2,700 cash for helping a client sell real estate.
	19	Defended a client in court and billed the client for $1,800.
	25	Received a bill for utilities, $600. The bill will be paid next month.
	29	Received cash on account, $1,500.
	30	Paid $1,200 cash for a 12-month insurance policy starting on February 1.
	30	Paid assistant's semimonthly salary, $1,120.
	31	Paid monthly rent expense, $1,800.
	31	Paid cash dividends of $2,200.

Requirements

1. Record each transaction in the journal, using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Building; Furniture; Accounts Payable; Utilities Payable; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open the following four-column accounts including account numbers: Cash, 101; Accounts Receivable, 111; Office Supplies, 121; Prepaid Insurance, 131; Land, 141; Building, 151; Furniture, 161; Accounts Payable, 201; Utilities Payable, 211; Notes Payable, 221; Common Stock, 301; Dividends, 311; Service Revenue, 411; Salaries Expense, 511; Rent Expense, 521; and Utilities Expense, 531.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 1 of the journal.
4. Prepare the trial balance of Terrence Murphy, Attorney, at January 31, 2018.

Learning Objectives 3, 4

3. Cash Balance $12,500

P2-32A Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

The trial balance of Shawn Merry, CPA, is dated March 31, 2018:

SHAWN MERRY, CPA
Trial Balance
March 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 11,000	
Accounts Receivable	16,500	
Office Supplies	400	
Land	30,000	
Furniture	0	
Automobile	0	
Accounts Payable		$ 3,800
Unearned Revenue		0
Common Stock		52,300
Dividends	0	
Service Revenue		8,200
Salaries Expense	5,600	
Rent Expense	800	
Total	$ 64,300	$ 64,300

During April, the business completed the following transactions:

Apr. 4	Collected $2,500 cash from a client on account.
8	Performed tax services for a client on account, $5,400.
13	Paid $3,000 on account.
14	Purchased furniture on account, $3,600.
15	Merry contributed his personal automobile to the business in exchange for common stock. The automobile had a market value of $9,500.
18	Purchased office supplies on account, $900.
19	Received $2,700 for tax services performed on April 8.
20	Paid cash dividends of $6,500.
21	Received $5,700 cash for consulting work completed.
24	Received $2,400 cash for accounting services to be completed next month.
27	Paid office rent, $600.
28	Paid employee salary, $1,700.

Requirements

1. Record the April transactions in the journal. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Furniture; Automobile; Accounts Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; and Rent Expense. Include an explanation for each entry.
2. Open the four-column ledger accounts listed in the trial balance, together with their balances as of March 31. Use the following account numbers: Cash, 11; Accounts Receivable, 12; Office Supplies, 13; Land, 14; Furniture, 15; Automobile, 16; Accounts Payable, 21; Unearned Revenue, 22; Common Stock, 31; Dividends, 33; Service Revenue, 41; Salaries Expense, 51; and Rent Expense, 52.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 5 of the journal.
4. Prepare the trial balance of Shawn Merry, CPA, at April 30, 2018.

P2-33A Correcting errors in a trial balance

Learning Objective 4

Total Debits $123,250

The trial balance of Beautiful Tots Child Care does not balance.

BEAUTIFUL TOTS CHILD CARE
Trial Balance
August 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 7,900	
Accounts Receivable	6,700	
Office Supplies	1,000	
Prepaid Insurance	300	
Equipment	91,500	
Accounts Payable		$ 3,400
Notes Payable		45,000
Common Stock		57,000
Dividends	5,000	
Service Revenue		12,350
Salaries Expense	4,400	
Rent Expense	750	
Total	**$ 117,550**	**$ 117,750**

The following errors are detected:

a. Cash is understated by $1,500.

b. A $4,100 debit to Accounts Receivable was posted as a credit.

c. A $1,400 purchase of office supplies on account was neither journalized nor posted.

d. Equipment was incorrectly transferred from the ledger as $91,500. It should have been transferred as $83,000.

e. Salaries Expense is overstated by $700.

f. A $300 cash payment for advertising expense was neither journalized nor posted.

g. A $200 cash dividend was incorrectly journalized as $2,000.

h. Service Revenue was understated by $4,100.

i. A 12-month insurance policy was posted as a $1,900 credit to Prepaid Insurance. Cash was posted correctly.

Prepare the corrected trial balance as of August 31, 2018. Journal entries are not required.

Learning Objectives 4, 5

P2-34A Preparing financial statements from the trial balance and calculating the debt ratio

2. Ending Retained Earnings $11,788

The trial balance as of July 31, 2018, for Sara Simon, Registered Dietician, is presented below:

SARA SIMON REGISTERED DIETICIAN
Trial Balance
July 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 38,000	
Accounts Receivable	9,000	
Office Supplies	2,300	
Prepaid Insurance	2,400	
Equipment	16,000	
Accounts Payable		$ 3,000
Unearned Revenue		3,912
Notes Payable		31,000
Common Stock		18,000
Dividends	2,800	
Service Revenue		17,888
Salaries Expense	1,700	
Rent Expense	1,100	
Utilities Expense	500	
Total	$ 73,800	$ 73,800

Requirements

1. Prepare the income statement for the month ended July 31, 2018.
2. Prepare the statement of retained earnings for the month ended July 31, 2018. The beginning balance of retained earnings was $0.
3. Prepare the balance sheet as of July 31, 2018.
4. Calculate the debt ratio as of July 31, 2018.

> Problems Group B

P2-35B Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Learning Objectives 3, 4

2. Cash Balance $69,680

Victor Yang practices medicine under the business title Victor Yang, M.D. During March, the medical practice completed the following transactions:

Mar.	1	Yang contributed $62,000 cash to the business in exchange for common stock.
	5	Paid monthly rent on medical equipment, $570.
	9	Paid $14,000 cash to purchase land to be used in operations.
	10	Purchased office supplies on account, $1,500.
	19	Borrowed $27,000 from the bank for business use.
	22	Paid $1,400 on account.
	28	The business received a bill for advertising in the daily newspaper to be paid in April, $220.
	31	Revenues earned during the month included $6,700 cash and $5,800 on account.
	31	Paid employees' salaries $2,100, office rent $1,500, and utilities $350. Record as a compound entry.
	31	The business received $1,000 for medical screening services to be performed next month.
	31	Paid cash dividends of $7,100.

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Accounts Payable; Advertising Payable; Unearned Revenue; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; and Advertising Expense.

Requirements

1. Journalize each transaction. Explanations are not required.
2. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal.*
3. Prepare the trial balance of Victor Yang, M.D., as of March 31, 2018.

Learning Objectives 3, 4

4. Total Debits $51,430

P2-36B Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Beth Stewart started her practice as a design consultant on November 1, 2018. During the first month of operations, the business completed the following transactions:

Nov. 1	Received $41,000 cash and issued common stock to Stewart.
4	Purchased office supplies, $1,200, and furniture, $2,300, on account.
6	Performed services for a law firm and received $2,100 cash.
7	Paid $27,000 cash to acquire land to be used in operations.
10	Performed services for a hotel and received its promise to pay the $800 within one week.
14	Paid for the furniture purchased on November 4 on account.
15	Paid assistant's semimonthly salary, $1,470.
17	Received cash on account, $500.
20	Prepared a design for a school on account, $680.
25	Received $1,900 cash for design services to be performed in December.
28	Received $3,100 cash for consulting with Plummer & Gordon.
29	Paid $840 cash for a 12-month insurance policy starting on December 1.
30	Paid assistant's semimonthly salary, $1,470.
30	Paid monthly rent expense, $650.
30	Received a bill for utilities, $650. The bill will be paid next month.
30	Paid cash dividends of $2,800.

Requirements

1. Record each transaction in the journal using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Furniture; Accounts Payable; Utilities Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal.*
4. Prepare the trial balance of Beth Stewart, Designer, as of November 30, 2018.

P2-37B Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

Learning Objectives 3, 4

3. Service Revenue Balance $6,800

Theodore McMahon opened a law office on April 1, 2018. During the first month of operations, the business completed the following transactions:

Apr. 1	McMahon contributed $70,000 cash to the business, Theodore McMahon, Attorney. The business issued common stock to McMahon.
3	Purchased office supplies, $1,100, and furniture, $1,300, on account.
4	Performed legal services for a client and received $2,000 cash.
7	Purchased a building with a market value of $150,000, and land with a market value of $30,000. The business paid $40,000 cash and signed a note payable to the bank for the remaining amount.
11	Prepared legal documents for a client on account, $400.
15	Paid assistant's semimonthly salary, $1,200.
16	Paid for the office supplies purchased on April 3 on account.
18	Received $2,700 cash for helping a client sell real estate.
19	Defended a client in court and billed the client for $1,700.
25	Received a bill for utilities, $650. The bill will be paid next month.
28	Received cash on account, $1,100.
29	Paid $3,600 cash for a 12-month insurance policy starting on May 1.
29	Paid assistant's semimonthly salary, $1,200.
30	Paid monthly rent expense, $2,100.
30	Paid cash dividends of $3,200.

Requirements

1. Record each transaction in the journal, using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Building; Furniture; Accounts Payable; Utilities Payable; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open the following four-column accounts including account numbers: Cash, 101; Accounts Receivable, 111; Office Supplies, 121; Prepaid Insurance, 131; Land, 141; Building, 151; Furniture, 161; Accounts Payable, 201; Utilities Payable, 211; Notes Payable, 221; Common Stock, 301; Dividends, 311; Service Revenue, 411; Salaries Expense, 511; Rent Expense, 521; and Utilities Expense, 531.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 1 of the journal.
4. Prepare the trial balance of Theodore McMahon, Attorney, at April 30, 2018.

CHAPTER 2

Learning Objectives 3, 4

3. Cash Balance $20,250

P2-38B Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

The trial balance of John Menning, CPA, is dated March 31, 2018:

JOHN MENNING, CPA Trial Balance March 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 17,000	
Accounts Receivable	10,500	
Office Supplies	1,200	
Land	29,000	
Furniture	0	
Automobile	0	
Accounts Payable		$ 3,800
Unearned Revenue		0
Common Stock		46,200
Dividends	0	
Service Revenue		11,200
Salaries Expense	2,500	
Rent Expense	1,000	
Total	$ 61,200	$ 61,200

During April, the business completed the following transactions:

Apr. 4	Collected $6,000 cash from a client on account.
8	Performed tax services for a client on account, $5,500.
13	Paid $3,300 on account.
14	Purchased furniture on account, $4,000.
15	Menning contributed his personal automobile to the business in exchange for common stock. The automobile had a market value of $11,500.
18	Purchased office supplies on account, $1,600.
19	Received $2,750 for tax services performed on April 8.
20	Paid cash dividends of $7,500.
21	Received $4,900 cash for consulting work completed.
24	Received $2,500 cash for accounting services to be completed next month.
27	Paid office rent, $900.
28	Paid employee salary, $1,200.

Requirements

1. Record the April transactions in the journal using the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Furniture; Automobile; Accounts Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; and Rent Expense. Include an explanation for each entry.
2. Open the four-column ledger accounts listed in the trial balance, together with their balances as of March 31. Use the following account numbers: Cash, 11; Accounts Receivable, 12; Office Supplies, 13; Land, 14; Furniture, 15; Automobile, 16; Accounts Payable, 21; Unearned Revenue, 22; Common Stock, 31; Dividends, 33; Service Revenue, 41; Salaries Expense, 51; and Rent Expense, 52.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 5 of the journal.
4. Prepare the trial balance of John Menning, CPA, at April 30, 2018.

P2-39B Correcting errors in a trial balance

Learning Objective 4

Total Debits $123,300

The trial balance of Love to Learn Child Care does not balance.

LOVE TO LEARN CHILD CARE
Trial Balance
May 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 8,060	
Accounts Receivable	8,700	
Office Supplies	1,000	
Prepaid Insurance	1,700	
Equipment	90,400	
Accounts Payable		$ 3,000
Notes Payable		45,000
Common Stock		54,000
Dividends	3,740	
Service Revenue		16,300
Salaries Expense	4,350	
Rent Expense	400	
Total	$ 118,350	$ 118,300

The following errors are detected:

a. Cash is understated by $1,800.

b. A $3,800 debit to Accounts Receivable was posted as a credit.

c. A $1,000 purchase of office supplies on account was neither journalized nor posted.

d. Equipment was incorrectly transferred from the ledger as $90,400. It should have been transferred as $82,500.

e. Salaries Expense is overstated by $350.

f. A $300 cash payment for advertising expense was neither journalized nor posted.

g. A $160 cash dividend was incorrectly journalized as $1,600.

h. Service Revenue was understated by $4,000.

i. A 12-month insurance policy was posted as a $1,400 credit to Prepaid Insurance. Cash was posted correctly.

Prepare the corrected trial balance as of May 31, 2018. Journal entries are not required.

Learning Objectives 4, 5

1. Net Income $13,404

P2-40B Preparing financial statements from the trial balance and calculating the debt ratio

The trial balance as of July 31, 2018, for Sheila Sanchez, Registered Dietician, is presented below:

SHEILA SANCHEZ, REGISTERED DIETICIAN Trial Balance July 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 32,000	
Accounts Receivable	9,100	
Office Supplies	1,400	
Prepaid Insurance	2,600	
Equipment	24,000	
Accounts Payable		$ 3,400
Unearned Revenue		1,296
Notes Payable		34,000
Common Stock		20,000
Dividends	3,000	
Service Revenue		15,804
Salaries Expense	1,600	
Rent Expense	700	
Utilities Expense	100	
Total	**$ 74,500**	**$ 74,500**

Requirements

1. Prepare the income statement for the month ended July 31, 2018.
2. Prepare the statement of retained earnings for the month ended July 31, 2018. The beginning balance of retained earnings was $0.
3. Prepare the balance sheet as of July 31, 2018.
4. Calculate the debt ratio as of July 31, 2018.

CRITICAL THINKING

> Using Excel

P2-41 Using Excel to journalize and post transactions, and to create financial statements

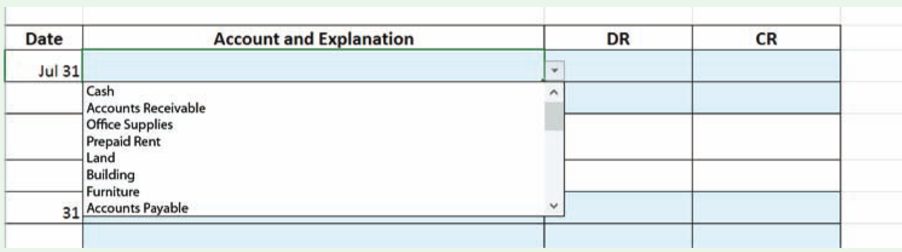
Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Redmond Corporation started operations on April 1, 2018. Seventeen transactions occurred during April. Financial statements are prepared at the end of the month.

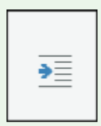
Requirements

1. Use Excel to record the transactions for April. Use the blue shaded areas for inputs.

a. To record the account name in the journal, click in the Account and Explanation column. A drop down arrow will appear to the right. Click the arrow and select an account from the chart of accounts. Use the explanation to help you with the entry.



b. Indent the account name of the account to be credited using the indent button on the Home tab. Click the Increase Indent button twice.



2. Post the transactions to T-Accounts. Use the blue shaded areas for inputs.

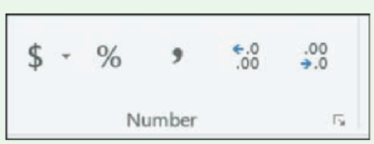
a. For each transaction, post the amount on the correct side of the T-Account. The T-account totals will be calculated automatically.

b. Total debits should equal total credits. The debit-credit balance check appears in the top right-hand corner of the T-Account worksheet.

3. Prepare the income statement, statement of retained earnings, and balance sheet for the company using the trial balance. Each financial statement appears on a separate worksheet tab.

a. Fill in the blue shaded areas using a formula that references the account balances in the trial balance at the end of the month.

b. Format the cells requiring dollar signs. Number formatting is located on the Home tab.



c. Format the cells requiring a single underline and cells requiring double underlines. The borders tool is found on the Home tab. It looks like a window pane. Click the down arrow for different border selections.

> Continuing Problem

P2-42 Journalizing transactions, posting to T-accounts, and preparing a trial balance

Problem P2-42 continues with the company introduced in Chapter 1, Canyon Canoe Company. Here you will account for Canyon Canoe Company's transactions as it is actually done in practice. Begin by reviewing the transactions from Chapter 1. The transactions have been reprinted below.

Nov. 1	Received $16,000 cash to begin the company and issued common stock to Amber and Zach.
2	Signed a lease for a building and paid $1,200 for the first month's rent.
3	Purchased canoes for $4,800 on account.
4	Purchased office supplies on account, $750.
7	Earned $1,400 cash for rental of canoes.
13	Paid $1,500 cash for wages.
15	Paid $50 dividends to stockholders.
16	Received a bill for $150 for utilities. (Use separate payable account.)
20	Received a bill for $175 for cell phone expenses. (Use separate payable account.)
22	Rented canoes to Early Start Daycare on account, $3,000.
26	Paid $1,000 on account related to the November 3 purchase.
28	Received $750 from Early Start Daycare for canoe rental on November 22.
30	Paid $100 dividends to stockholders.

In addition, Canyon Canoe Company completed the following transactions for December.

Dec. 1	Amber and Zack contributed land on the river (worth $85,000) and a small building to use as a rental office (worth $35,000) in exchange for common stock.
1	Prepaid $3,000 for three months' rent on the warehouse where the company stores the canoes.
2	Purchased canoes signing a note payable for $7,200
4	Purchased office supplies on account for $500.
9	Received $4,500 cash for canoe rentals to customers.
15	Rented canoes to customers for $3,500, but will be paid next month.
16	Received a $750 deposit from a canoe rental group that will use the canoes next month.
18	Paid the utilities and telephone bills from last month.
19	Paid various accounts payable, $2,000.
20	Received bills for the telephone ($325) and utilities ($295) which will be paid later.
31	Paid wages of $1,800.
31	Paid cash dividend to stockholders, $300.

Requirements

1. Journalize the transactions for both November and December, using the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Rent; Land; Building; Canoes; Accounts Payable; Utilities Payable; Telephone Payable;

Unearned Revenue; Notes Payable; Common Stock; Dividends; Canoe Rental Revenue; Rent Expense; Utilities Expense; Wages Expense; and Telephone Expense. Explanations are not required. (Hint: For November transactions, refer to your answer for Chapter 1.)

2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, and calculate account balances. Formal posting references are not required.
4. Prepare a trial balance as of December 31, 2018.
5. Prepare the income statement of Canyon Canoe Company for the two months ended December 31, 2018.
6. Prepare the statement of retained earnings for the two months ended December 31, 2018.
7. Prepare the balance sheet as of December 31, 2018.
8. Calculate the debt ratio for Canyon Canoe Company at December 31, 2018.

> Practice Set

P2-43 Journalizing transactions, posting to T-accounts, and preparing a trial balance

Consider the following transactional data for the first month of operations for Crystal Clear Cleaning.

Nov. 1	Stockholders contributed $15,000 and a truck, with a market value of $3,000, to the business in exchange for common stock.
2	The business paid $4,000 to Pleasant Properties for November through February rent. (Debit Prepaid Rent)
3	Paid $4,800 for a business insurance policy for the term November 1, 2018 through October 31, 2019. (Debit Prepaid Insurance)
4	Purchased cleaning supplies on account, $320.
5	Purchased on account an industrial vacuum cleaner costing $1,500. The invoice is payable November 25.
7	Paid $3,900 for a computer and printer.
9	Performed cleaning services on account in the amount of $4,700.
10	Received $200 for services rendered on November 9.
15	Paid employees, $400.
16	Received $15,000 for a 1-year contract beginning November 16 for cleaning services to be provided. Contract begins November 16, 2018, and ends November 15, 2019. (Credit Unearned Revenue)
17	Provided cleaning services and received $400 cash.
18	Received a utility bill for $175 with a due date of December 4, 2018. (Use Accounts Payable)
20	Borrowed $36,000 from bank with interest rate of 6% per year.
21	Received $500 on account for services performed on November 9.
25	Paid $750 on account for vacuum cleaner purchased on November 5.
29	Paid $200 for advertising.
30	Cash dividends of $1,400 were paid to stockholders.

Requirements

1. Journalize the transactions, using the following accounts: Cash; Accounts Receivable; Cleaning Supplies; Prepaid Rent; Prepaid Insurance; Equipment; Truck; Accounts Payable; Unearned Revenue; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Advertising Expense; and Utilities Expense. Explanations are not required.
2. Open a T-account for each account.
3. Post the journal entries to the T-accounts, and calculate account balances.
4. Prepare a trial balance as of November 30, 2018.

> Tying It All Together Case 2-1

Before you begin this assignment, review the Tying It All Together feature in the chapter.

Part of the **Fry's Electronics, Inc.**'s experience involves providing technical support to its customers. This includes in-home installations of electronics and also computer support at their retail store locations.

Requirements

1. Suppose Fry's Electronics, Inc. provides $10,500 of computer support at the Dallas-Fort Worth store during the month of November. How would Fry's Electronics record this transaction? Assume all customers paid in cash. What financial statement(s) would this transaction affect?
2. Assume Fry's Electronics, Inc.'s Modesto, California, location received $24,000 for an annual contract to provide computer support to the local city government. How would Fry's Electronics record this transaction? What financial statement(s) would this transaction affect?
3. What is the difference in how revenue is recorded in requirements 1 and 2? Clearly state when revenue is recorded in each requirement.

> Decision Case 2-1

Your friend, Dean McChesney, requested that you advise him on the effects that certain transactions will have on his business, A-Plus Travel Planners. Time is short, so you cannot journalize the transactions. Instead, you must analyze the transactions without a journal. McChesney will continue the business only if he can expect to earn a monthly net income of $6,000. The business completed the following transactions during June:

a. McChesney deposited $10,000 cash in a business bank account to start the company. The company issued common stock to McChesney.
b. Paid $300 cash for office supplies.
c. Incurred advertising expense on account, $700.
d. Paid the following cash expenses: administrative assistant's salary, $1,400; office rent, $1,000.
e. Earned service revenue on account, $8,800.
f. Collected cash from customers on account, $1,200.

Requirements

1. Open the following T-accounts: Cash; Accounts Receivable; Office Supplies; Accounts Payable; Common Stock; Service Revenue; Salaries Expense; Rent Expense; and Advertising Expense.
2. Post the transactions directly to the accounts without using a journal. Record each transaction by letter. Calculate account balances.
3. Prepare a trial balance at June 30, 2018.
4. Compute the amount of net income or net loss for this first month of operations. Would you recommend that McChesney continue in business?

> Ethical Issue 2-1

Better Days Ahead, a charitable organization, has a standing agreement with First National Bank. The agreement allows Better Days Ahead to overdraw its cash balance at the bank when donations are running low. In the past, Better Days Ahead managed funds wisely and rarely used this privilege. Jacob Henson has recently become the president of Better Days Ahead. To expand operations, Henson acquired office equipment and spent large amounts on fundraising. During Henson's presidency, Better Days Ahead has maintained a negative bank balance of approximately $10,000.

What is the ethical issue in this situation, if any? State why you approve or disapprove of Henson's management of Better Days Ahead's funds.

> Fraud Case 2-1

Roy Akins was the accounting manager at Zelco, a tire manufacturer, and he played golf with Hugh Stallings, the CEO, who was something of a celebrity in the community. The CEO stood to earn a substantial bonus if Zelco increased net income by year-end. Roy was eager to get into Hugh's elite social circle; he boasted to Hugh that he knew some accounting tricks that could increase company income by simply revising a few journal entries for rental payments on storage units. At the end of the year, Roy changed the debits from "rent expense" to "prepaid rent" on several entries. Later, Hugh got his bonus, and the deviations were never discovered.

Requirements

1. How did the change in the journal entries affect the net income of the company at year-end?
2. Who gained and who lost as a result of these actions?

> Financial Statement Case 2-1

Refer to http://www.pearsonhighered.com/Horngren to view a link to **Target Corporation's** Fiscal 2015 Annual Report.

Requirements

1. Calculate the debt ratio for Target Corporation as of January 30, 2016.
2. How did the debt ratio for Target Corporation compare to the debt ratio for **Kohl's Corporation**? Discuss.

> Communication Activity 2-1

In 35 words or fewer, explain the difference between a debit and a credit, and explain what the normal balance of the six account types is.

> Quick Check Answers

1. a **2.** c **3.** d **4.** d **5.** b **6.** b **7.** d **8.** b **9.** a **10.** b

Chapter 2
Recording Business Transactions

Review Questions

1. The three categories of the accounting equation are assets, liabilities, and equity. Assets include Cash, Accounts Receivable, Notes Receivable, Prepaid Expenses, Land, Building, Equipment, Furniture, and Fixtures. Liabilities include Accounts Payable, Notes Payable, Accrued Liability, and Unearned Revenue. Equity includes Common Stock, Dividends, Revenue, and Expenses.

2. Companies need a way to organize their accounts so they use a chart of accounts. Accounts starting with 1 are usually Assets, 2 – Liabilities, 3 – Equity, 4 – Revenues, and 5 – Expenses. The second and third digits in account numbers indicate where the account fits within the category.

3. A chart of accounts and a ledger are similar in that they both list the account names and account numbers of the business. A ledger, though, provides more detail. It includes the increases and decreases of each account for a specific period and the balance of each account at a specific point in time.

4. With a double-entry you need to record the dual effects of each transaction. Every transaction affects at least two accounts.

5. A T-account is a shortened form of each account in the ledger. The debit is on the left side, credit on the right side, and the account name is shown on top.

6. Debits are increases for assets, dividends, and expenses. Debits are decreases for liabilities, common stock, and revenue.

7. Credits are increases for liabilities, common stock, and revenue. Credits are decreases for assets, dividends, and expenses.

8. Assets, dividends, and expenses have a normal debit balance. Liabilities, common stock, and revenue have a normal credit balance.

9. Source documents provide the evidence and data for accounting transactions. Examples of source documents a business would have are: bank deposit slips, purchase invoices, bank checks, and sales invoices

10. Transactions are first recorded in a journal, which is the record of transactions in date order.

11. Step 1: Identify the accounts and the account type. You need this information before you can complete the next step. Step 2: Decide if each account increases or decreases, then apply the rules of debits and credits. Reviewing the rules of debits and credits, we use the accounting equation to help determine debits and credits for each account. Step 3: Record transactions in the journal using journal entries. Step 4: Post the journal entry to the ledger. When journal entries are posted from the journal to the ledger, the dollar amount is transferred from the debit and credit columns to the specific accounts in the ledger. The date on the journal entry should also be transferred to the accounts in the ledger. Step 5: Determine whether the accounting equation is in balance. After each entry the accounting equation should always be in balance.

12. Part 1: Date of the transaction. Part 2: Debit account name and dollar amount. Part 3: Credit account name and dollar amount. The credit account name is indented. Part 4: Brief explanation.

13. When transactions are posted from the journal to the ledger, the dollar amount is transferred from the debit and credit columns to the specific accounts in the ledger. The date of the journal entry is also transferred to the accounts in the ledger. The posting reference columns in the journal and ledger are also completed. In a computerized system, this step is completed automatically when the transaction is recorded in the journal.

14. The trial balance is used to prove the equality of total debits and total credits of all accounts in the ledger; it is also used to prepare the financial statements.

15. A trial balance verifies the equality of total debits and total credits of all accounts on the trial balance and is an internal document used only by employees of the company. The balance sheet, on the other hand, presents the business's accounting equation and is a financial statement that can be used by both internal and external users.

16. If total debits equal total credits on the trial balance, it does not mean that the trial balance is error-free. An incorrect amount could have been used, an entry could have been completely missed, or the wrong account title could have been debited or credited.

17. The debt ratio is calculated by dividing total liabilities by total assets and shows the proportion of assets financed with debt. It can be used to evaluate a business's ability to pay its debts.

Short Exercises

S2-1

a. Notes Receivable **(A)**
b. Common Stock **(E)**
c. Prepaid Insurance **(A)**
d. Notes Payable **(L)**
e. Rent Revenue **(E)**
f. Taxes Payable **(L)**
g. Rent Expense **(E)**
h. Furniture **(A)**
i. Dividends **(E)**
j. Unearned Revenue **(L)**

S2-2

a. Increase to Accounts Receivable **(DR)**
b. Decrease to Unearned Revenue **(DR)**
c. Decrease to Cash **(CR)**
d. Increase to Interest Expense **(DR)**
e. Increase to Salaries Payable **(CR)**
f. Decrease to Prepaid Rent **(CR)**
g. Increase to Common Stock **(CR)**
h. Increase to Notes Receivable **(DR)**
i. Decrease to Accounts Payable **(DR)**
j. Increase to Interest Revenue **(CR)**

S2-3

a. Notes Payable **(CR)**
b. Dividends **(DR)**
c. Service Revenue **(CR)**
d. Land **(DR)**
e. Unearned Revenue **(CR)**
f. Common Stock **(CR)**
g. Utilities Expense **(DR)**
h. Office Supplies **(DR)**
i. Advertising Expense **(DR)**
j. Interest Payable **(CR)**

S2-4

Accounts Payable			
May 2	6,000	21,000	May 1
May 22	11,500	500	May 5
		8,500	May 15
		500	May 23
		13,000	Bal.

S2-5

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash	34,000	
	Common Stock		34,000
	Received cash in exchange for common stock.		
2	Medical Supplies	17,000	
	Accounts Payable		17,000
	Purchased medical supplies on account.		
4	Cash	1,600	
	Service Revenue		1,600
	Performed services for patients.		
12	Rent Expense	3,000	
	Cash		3,000
	Paid rent with cash.		
15	Accounts Receivable	7,000	
	Service Revenue		7,000
	Performed services for patients on account.		

S2-6

Date	Accounts and Explanation	Debit	Credit
Jan. 22	Accounts Receivable	7,500	
	Service Revenue		7,500
	Performed services for customers on account.		
30	Cash	8,000	
	Accounts Receivable		8,000
	Received cash on account from customers.		
31	Utilities Expense	220	
	Utilities Payable		220
	Received a utility bill due in February.		
31	Salaries Expense	2,500	
	Cash		2,500
	Paid monthly salary to salesman.		
31	Cash	2,310	
	Unearned Revenue		2,310
	Received cash for 3 months consulting services in advance.		
31	Dividends	950	
	Cash		950
	Paid cash dividends.		

S2-7
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 15	Office Supplies	3,400	
	Accounts Payable		3,400
	Purchased office supplies on account.		
28	Accounts Payable	1,800	
	Cash		1,800
	Paid cash on account.		

Requirement 2

Cash

Bal.	21,000	1,800	Mar. 28
Bal.	19,200		

Accounts Payable

Mar. 28	1,800	3,400	Mar. 15
		1,600	Bal.

Office Supplies

Mar. 15	3,400		
Bal.	3,400		

S2-8

SMITHSON FLOOR COVERINGS
Trial Balance
December 31, 2018

Account Title	Balance	
	Debit	Credit
Cash	$ 7,000	
Accounts Receivable	3,600	
Equipment	36,000	
Accounts Payable		$ 2,200
Salaries Payable		25,000
Interest Payable		6,000
Common Stock		24,000
Dividends	16,100	
Service Revenue		26,000
Rent Expense	17,000	
Salaries Expense	1,600	
Utilities Expense	1,900	
Total	**$ 83,200**	**$ 83,200**

S2-9

Debt ratio = Total liabilities / Total assets = $30,000 / $200,000 = 0.15 = 15%

Exercises

E2-10

1. g
2. a
3. e
4. d
5. j
6. i
7. f
8. b
9. h
10. c

E2-11

Assets	Equity
100 – Cash	300 – Common Stock
110 – Automotive Supplies	310 – Retained Earnings
120 – Equipment	320 – Dividends
	Revenues
Liabilities	400 – Service Revenue
200 – Accounts Payable	
210 – Unearned Revenue	Expenses
	500 – Utilities Expense
	510 – Advertising Expense

E2-12

		Requirement 1	Requirement 2	Requirement 3
	Account Name	**Type of Account**	**Increase with Debit/Credit**	**Normal Balance Debit/Credit**
a.	Interest Revenue	E	CR	CR
b.	Accounts Payable	L	CR	CR
c.	Common Stock	E	CR	CR
d.	Office Supplies	A	DR	DR
e.	Advertising Expense	E	DR	DR
f.	Unearned Revenue	L	CR	CR
g.	Prepaid Rent	A	DR	DR
h.	Utilities Expense	E	DR	DR
i.	Dividends	E	DR	DR
j.	Service Revenue	E	CR	CR

E2-13

(a) Assets = Liabilities + (b) Equity

Contributed Capital + Retained Earnings

Assets		=	(c) Liabilities		+	Common Stock		–	(d) Dividends		+	Revenues		–	Expenses	
(e) Incr.	Decr.		Decr.	(f) Incr.		(g) Decr.	(h) Incr.		(i) Incr.	(j) Decr.		(k) Decr.	(l) Incr.		Incr.	(m) Decr.
Debit	(n) Credit		(o) Debit	Credit		(p) Debit	Credit		(q) Debit	Credit		Debit	Credit		(r) Debit	Credit

(a) Assets
(b) Equity
(c) Liabilities
(d) Dividends
(e) Incr.
(f) Incr.
(g) Decr.
(h) Incr.
(i) Incr.
(j) Decr.
(k) Decr.
(l) Incr.
(m) Decr.
(n) Credit
(o) Debit
(p) Debit
(q) Debit
(r) Debit

E2-14

a. Bank deposit slip
b. Purchase invoice
c. Sales invoice

E2-15

a. Purchased equipment with cash.
b. Paid cash dividends to stockholders.
c. Paid wages owed to employees, previously recorded.
d. Received equipment for the business in exchange for common stock.
e. Received cash from customer for work to be completed in the future.
f. Paid for advertising with cash.
g. Performed services that were paid by the customer.

E2-16

Date	Accounts and Explanation	Debit	Credit
Jul. 2	Cash	14,000	
	Common Stock		14,000
	Issued common stock in exchange for cash.		
4	Utilities Expense	370	
	Cash		370
	Paid utility expense.		
5	Equipment	1,600	
	Accounts Payable		1,600
	Purchased equipment on account.		
10	Accounts Receivable	2,900	
	Service Revenue		2,900
	Performed services for client on account.		
12	Cash	7,100	
	Notes Payable		7,100
	Borrowed cash by signing note.		
19	Dividends	200	
	Cash		200
	Paid cash dividends.		

E2-16, cont.

21	Office Supplies	840	
	Cash		840
	Purchased office supplies with cash.		
27	Accounts Payable	1,600	
	Cash		1,600
	Paid cash on account.		

E2-17
Requirements 1, 2, and 3

Cash

Jul. 2	14,000	370	Jul. 4
Jul. 12	7,100	200	Jul. 19
		840	Jul. 21
		1,600	Jul. 27
Balance	18,090		

Accounts Payable

Jul. 27	1,600	1,600	Jul. 5
		0	Balance

Accounts Receivable

Jul. 10	2,900		
Balance	2,900		

Notes Payable

		7,100	Jul. 12
		7,100	Balance

Office Supplies

Jul. 21	840		
Balance	840		

Common Stock

		14,000	Jul. 2
		14,000	Balance

Equipment

Jul. 5	1,600		
Balance	1,600		

Dividends

Jul. 19	200		
Balance	200		

Service Revenue

		2,900	Jul. 10
		2,900	Balance

Utilities Expense

Jul. 4	370		
Balance	370		

E2-18

Date	Accounts and Explanation	Post. Ref.	Debit	Credit
May 1	Cash		105,000	
	Common Stock.			105,000
	Issued common stock in exchange for cash.			
2	Office Supplies		550	
	Accounts Payable			550
	Purchased office supplies on account.			
4	Building		45,000	
	Land		12,000	
	Cash			57,000
	Purchased building and land for cash.			
6	Cash		3,600	
	Service Revenue			3,600
	Performed services for customers for cash.			
9	Accounts Payable		350	
	Cash			350
	Paid cash on account.			
17	Accounts Receivable		3,500	
	Service Revenue			3,500
	Performed services for customers on account.			
19	Rent Expense		1,200	
	Cash			1,200
	Paid rent for the month.			
20	Cash		1,500	
	Unearned Revenue			1,500
	Received cash from customers for services to be performed next month.			
21	Prepaid Advertising		900	
	Cash			900
	Paid for next month's advertising.			

E2-18, cont.

23	Cash Accounts Receivable *Received cash on account from customer.*		3,100	 3,100
31	Salaries Expense Cash *Paid salaries.*		1,700	 1,700

E2-19
Requirement 2

Date	Accounts and Explanation	Post. Ref.	Debit	Credit
May 1	Cash Common Stock *Issued common stock in exchange for cash.*	110 310	105,000	 105,000
2	Office Supplies Accounts Payable *Purchased office supplies on account.*	130 210	550	 550
4	Building Land Cash *Purchased building and land for cash.*	160 150 110	45,000 12,000	 57,000
6	Cash Service Revenue *Performed services for customers for cash.*	110 410	3,600	 3,600
9	Accounts Payable Cash *Paid cash on account.*	210 110	350	 350
17	Accounts Receivable Service Revenue *Performed services for customers on account.*	120 410	3,500	 3,500

E2-19, cont.

19	Rent Expense	510	1,200	
	Cash	110		1,200
	Paid rent for the month.			
20	Cash	110	1,500	
	Unearned Revenue	220		1,500
	Received cash from customers for services to be performed next month.			
21	Prepaid Advertising	140	900	
	Cash	110		900
	Paid for next month's advertising.			
23	Cash	110	3,100	
	Accounts Receivable	120		3,100
	Received cash on account from customer.			
31	Salaries Expense	520	1,700	
	Cash	110		1,700
	Paid salaries.			

Requirements 1 and 2

CASH Account No. 110

					Balance	
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
May 1		J10	105,000		105,000	
May 4		J10		57,000	48,000	
May 6		J10	3,600		51,600	
May 9		J10		350	51,250	
May 19		J10		1,200	50,050	
May 20		J10	1,500		51,550	
May 21		J10		900	50,650	
May 23		J10	3,100		53,750	
May 31		J10		1,700	52,050	

ACCOUNTS RECEIVABLE Account No. 120

					Balance	
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
May 17		J10	3,500		3,500	
May 23		J10		3,100	400	

E2-19, cont.

OFFICE SUPPLIES — Account No. 130

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 2		J10	550		550	

PREPAID ADVERTISING — Account No. 140

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 21		J10	900		900	

LAND — Account No. 150

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 4		J10	12,000		12,000	

BUILDING — Account No. 160

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 4		J10	45,000		45,000	

ACCOUNTS PAYABLE — Account No. 210

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 2		J10		550		550
May 9		J10	350			200

UNEARNED REVENUE — Account No. 220

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 20		J10		1,500		1,500

COMMON STOCK — Account No. 310

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 1		J10		105,000		105,000

E2-19, cont.

SERVICE REVENUE Account No. 410

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 6		J10		3,600		3,600
May 17		J10		3,500		7,100

RENT EXPENSE Account No. 510

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 19		J10	1,200		1,200	

SALARIES EXPENSE Account No. 520

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
May 31		J10	1,700		1,700	

E2-20

1. The business received cash of $370,000 and issued common stock.
2. Paid $360,000 cash for a building.
3. Borrowed $260,000 cash, signing a note payable.
4. Purchased office supplies on account, $1,500.
5. Paid $1,200 on accounts payable.
6. Paid property tax expense, $1,500.
7. Paid rent $1,400 and salaries $2,500.
8. Cash dividends of $7,000 paid to stockholders.
9. Performed services for customers and received cash, $21,000.

E2-21

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
1.	Cash		57,000	
	Common Stock			57,000
	Issued common stock in exchange for cash.			
2.	Office Supplies		800	
	Accounts Payable			800
	Purchased office supplies on account.			
3.	Building		40,000	
	Cash			40,000
	Purchased building for cash.			
4.	Cash		46,000	
	Notes Payable			46,000
	Borrowed money signing a note payable.			
5.	Equipment		3,800	
	Cash			3,800
	Purchased equipment for cash.			

E2-22

ANDERSON MOVING COMPANY Trial Balance August 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,000	
Accounts Receivable	10,000	
Office Supplies	100	
Building	41,000	
Trucks	123,000	
Accounts Payable		$ 4,000
Notes Payable		56,000
Common Stock		49,800
Dividends	5,600	
Service Revenue		82,000
Salaries Expense	6,000	
Fuel Expense	1,000	
Insurance Expense	600	
Utilities Expense	300	
Advertising Expense	200	
Total	**$ 191,800**	**$ 191,800**

E2-23

MCMAHON FARM EQUIPMENT REPAIR Trial Balance May 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 9,020	
Accounts Receivable	3,100	
Land	14,000	
Building	29,000	
Equipment	16,000	
Salaries Payable		$ 3,400
Notes Payable		25,000
Common Stock		47,000
Dividends	2,000	
Service Revenue		5,300
Salaries Expense	6,300	
Property Tax Expense	1,000	
Advertising Expense	280	
Total	**$ 80,700**	**$ 80,700**

E2-24
Requirement 2

Date	Accounts and Explanation	Post Ref.	Debit	Credit
June 1	Cash	110	13,200	
	Office Furniture	140	5,300	
	Common Stock	310		18,500
5	Rent Expense	520	1,300	
	Cash	110		1,300
9	Office Supplies	130	600	
	Accounts Payable	210		600
14	Salaries Expense	510	1,900	
	Cash	110		1,900
18	Utilities Expense	530	370	
	Utilities Payable	220		370

E2-24, cont.

21	Accounts Payable	210	500	
	Cash	110		500
25	Accounts Receivable	120	5,700	
	Service Revenue	410		5,700
28	Dividends	320	6,700	
	Cash	110		6,700

Requirements 1 & 2

CASH Account No. 110

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 1		J10	13,200		13,200	
June 5		J10		1,300	11,900	
June 14		J10		1,900	10,000	
June 21		J10		500	9,500	
June 28		J10		6,700	2,800	

ACCOUNTS RECEIVABLE Account No. 120

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 25		J10	5,700		5,700	

OFFICE SUPPLIES Account No. 130

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 9		J10	600		600	

OFFICE FURNITURE Account No. 140

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 1		J10	5,300		5,300	

E2-24, cont.

ACCOUNTS PAYABLE — Account No. 210

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 9		J10		600		600
June 21		J10	500			100

UTILITIES PAYABLE — Account No. 220

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 18		J10		370		370

COMMON STOCK — Account No. 310

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 1		J10		18,500		18,500

DIVIDENDS — Account No. 320

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 28		J10	6,700		6,700	

SERVICE REVENUE — Account No. 410

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 25		J10		5,700		5,700

SALARIES EXPENSE — Account No. 510

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 14		J10	1,900		1,900	

E2-24, cont.

RENT EXPENSE — Account No. 520

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 5		J10	1,300		1,300	

UTILITIES EXPENSE — Account No. 530

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
June 18		J10	370		370	

Requirement 3

TERESA PARKER, CPA
Trial Balance
June 30, 2018

Acct. No.	Account Title	Balance Debit	Balance Credit
110	Cash	$ 2,800	
120	Accounts Receivable	5,700	
130	Office Supplies	600	
140	Office Furniture	5,300	
210	Accounts Payable		$ 100
220	Utilities Payable		370
310	Common Stock		18,500
320	Dividends	6,700	
410	Service Revenue		5,700
510	Salaries Expense	1,900	
520	Rent Expense	1,300	
530	Utilities Expense	370	
	Total	**$ 24,670**	**$ 24,670**

E2-25
Requirements 1 and 2

	Debits equal Credits, Yes or No	Accounts	Amount	High or Low
a.	No	Notes Payable	$5,000	Low
b.	No	Utilities Expense	900	Low
c.	Yes	Furniture	600	High
		Accounts Payable	600	High
d.	No	Cash	450	Low
e.	Yes	Office Supplies	90	Low
		Accounts Payable	90	Low

E2-26

COUNTRYSIDE PAINTING SPECIALISTS
Trial Balance
November 30, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 12,100	
Accounts Receivable	1,300	
Office Supplies	200	
Painting Equipment	13,500	
Accounts Payable		$ 3,300
Unearned Revenue		1,700
Common Stock		15,000
Dividends	3,500	
Service Revenue		15,600
Advertising Expense	550	
Rent Expense	1,800	
Salaries Expense	2,400	
Utilities Expense	250	
Total	**$ 35,600**	**$ 35,600**

E2-27

JOY MCDOWELL TUTORING SERVICE Trial Balance May 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 3,200	
Accounts Receivable	1,600	
Office Supplies	600	
Computer Equipment	15,800	
Accounts Payable		$ 12,900
Utilities Payable		1,100
Common Stock		11,700
Dividends	10,400	
Service Revenue		9,600
Salaries Expense	1,900	
Rent Expense	800	
Utilities Expense	1,000	
Total	**$ 35,300**	**$ 35,300**

Explanation:

a. Increase Cash by $400, decrease Accounts Receivable by $400.

b. Increase Accounts Payable by $1,800 ($2,000 – $200).

c. Increase Utilities Expense and Utilities Payable by $300 each.

d. Increase Common Stock by $100.

E2-28

Liabilities:	
Accounts Payable	$ 1,600
Utilities Payable	800
Unearned Revenue	24,795
Notes Payable	69,000
Total liabilities	$ 96,195

Assets:	
Cash	$ 30,000
Accounts Receivable	7,900
Office Supplies	3,000
Office Equipment	30,000
Building	75,000
Land	29,000
Total assets	$ 174,900

Debt ratio = Total liabilities / Total assets = $96,195 / $174,900 = 0.55 = 55%

Problems (Group A)

P2-29A

Requirement 1

Date	Accounts and Explanation	Post Ref.	Debit	Credit
July 1	Cash		63,000	
	Common Stock			63,000
5	Rent Expense		510	
	Cash			510
9	Land		23,000	
	Cash			23,000
10	Office Supplies		1,600	
	Accounts Payable			1,600
19	Cash		22,000	
	Notes Payable			22,000
22	Accounts Payable		1,100	
	Cash			1,100
28	Advertising Expense		240	
	Advertising Payable			240
31	Cash		6,400	
	Accounts Receivable		6,000	
	Service Revenue			12,400
31	Salaries Expense		2,200	
	Rent Expense		1,900	
	Utilities Expense		560	
	Cash			4,660
31	Cash		1,120	
	Unearned Revenue			1,120
31	Dividends		7,200	
	Cash			7,200

P2-29A, cont.
Requirement 2

Cash

Jul. 1	63,000	510	Jul. 5
Jul. 19	22,000	23,000	Jul. 9
Jul. 31	6,400	1,100	Jul. 22
Jul. 31	1,120	4,660	Jul. 31
		7,200	Jul. 31
Bal.	56,050		

Accounts Receivable

Jul. 31	6,000		
Bal.	6,000		

Office Supplies

Jul. 10	1,600		
Bal.	1,600		

Land

Jul. 9	23,000		
Bal.	23,000		

Accounts Payable

Jul. 22	1,100	1,600	Jul. 10
		500	Bal.

Advertising Payable

		240	Jul. 28
		240	Bal.

Unearned Revenue

		1,120	Jul. 31
		1,120	Bal.

Notes Payable

		22,000	Jul. 19
		22,000	Bal.

Common Stock

		63,000	Jul. 1
		63,000	Bal.

Dividends

Jul. 31	7,200		
Bal.	7,200		

Service Revenue

		12,400	Jul. 31
		12,400	Bal.

Salaries Expense

Jul. 31	2,200		
Bal.	2,200		

Rent Expense

Jul. 5	510		
Jul. 31	1,900		
Bal.	2,410		

Utilities Expense

Jul. 31	560		
Bal.	560		

Advertising Expense

Jul. 28	240		
Bal.	240		

P2-29A, cont.
Requirement 3

VINCE YORK, MD Trial Balance July 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 56,050	
Accounts Receivable	6,000	
Office Supplies	1,600	
Land	23,000	
Accounts Payable		$ 500
Advertising Payable		240
Unearned Revenue		1,120
Notes Payable		22,000
Common Stock		63,000
Dividends	7,200	
Service Revenue		12,400
Salaries Expense	2,200	
Rent Expense	2,410	
Utilities Expense	560	
Advertising Expense	240	
Total	**$ 99,260**	**$ 99,260**

P2-30A
Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Sep. 1	Cash		48,000	
	Common Stock			48,000
4	Office Supplies		1,200	
	Furniture		1,300	
	Accounts Payable			2,500
6	Cash		1,900	
	Service Revenue			1,900
7	Land		18,000	
	Cash			18,000
10	Accounts Receivable		1,200	
	Service Revenue			1,200
14	Accounts Payable		1,300	
	Cash			1,300
15	Salaries Expense		1,500	
	Cash			1,500
17	Cash		1,000	
	Accounts Receivable			1,000
20	Accounts Receivable		650	
	Service Revenue			650
25	Cash		2,100	
	Unearned Revenue			2,100
28	Cash		2,900	
	Service Revenue			2,900
29	Prepaid Insurance		600	
	Cash			600
30	Salaries Expense		1,500	
	Cash			1,500
30	Rent Expense		600	
	Cash			600

P2-30A, cont.

30	Utilities Expense		350	
	Utilities Payable			350
30	Dividends		3,700	
	Cash			3,700

Requirements 2 and 3

Cash

Sep. 1	48,000	18,000	Sep. 7
Sep. 6	1,900	1,300	Sep. 14
Sep. 17	1,000	1,500	Sep. 15
Sep. 25	2,100	600	Sep. 29
Sep. 28	2,900	1,500	Sep. 30
		600	Sep. 30
		3,700	Sep. 30
Bal.	28,700		

Accounts Payable

Sep. 14	1,300	2,500	Sep. 4
		1,200	Bal.

Utilities Payable

		350	Sep. 30
		350	Bal.

Accounts Receivable

Sep. 10	1,200	1,000	Sep. 17
Sep. 20	650		
Bal.	850		

Unearned Revenue

		2,100	Sep. 25
		2,100	Bal.

Office Supplies

Sep. 4	1,200		
Bal.	1,200		

Common Stock

		48,000	Sep. 1
		48,000	Bal.

Prepaid Insurance

Sep. 29	600		
Bal.	600		

Dividends

Sep. 30	3,700		
Bal.	3,700		

Land

Sep. 7	18,000		
Bal.	18,000		

Service Revenue

		1,900	Sep. 6
		1,200	Sep. 10
		650	Sep. 20
		2,900	Sep. 28
		6,650	Bal.

Furniture

Sep. 4	1,300		
Bal.	1,300		

P2-30A, cont.

Salaries Expense		
Sep. 15	1,500	
Sep. 30	1,500	
Bal.	3,000	

Rent Expense		
Sep. 30	600	
Bal.	600	

Utilities Expense		
Sep. 30	350	
Bal.	350	

Requirement 4

ANN SIMPSON, DESIGNER
Trial Balance
September 30, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 28,700	
Accounts Receivable	850	
Office Supplies	1,200	
Prepaid Insurance	600	
Land	18,000	
Furniture	1,300	
Accounts Payable		$ 1,200
Utilities Payable		350
Unearned Revenue		2,100
Common Stock		48,000
Dividends	3,700	
Service Revenue		6,650
Salaries Expense	3,000	
Rent Expense	600	
Utilities Expense	350	
Total	**$ 58,300**	**$ 58,300**

P2-31A
Requirements 1 and 3

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Jan. 1	Cash	101	78,000	
	Common Stock	301		78,000
3	Office Supplies	121	600	
	Furniture	161	1,700	
	Accounts Payable	201		2,300
4	Cash	101	1,000	
	Service Revenue	411		1,000
7	Building	151	130,000	
	Land	141	25,000	
	Cash	101		25,000
	Notes Payable	221		130,000
11	Accounts Receivable	111	400	
	Service Revenue	411		400
15	Salaries Expense	511	1,120	
	Cash	101		1,120
16	Accounts Payable	201	600	
	Cash	101		600
18	Cash	101	2,700	
	Service Revenue	411		2,700
19	Accounts Receivable	111	1,800	
	Service Revenue	411		1,800
25	Utilities Expense	531	600	
	Utilities Payable	211		600
29	Cash	101	1,500	
	Accounts Receivable	111		1,500
30	Prepaid Insurance	131	1,200	
	Cash	101		1,200
30	Salaries Expense	511	1,120	
	Cash	101		1,120

P2-31A, cont.

31	Rent Expense	521	1,800	
	Cash	101		1,800
31	Dividends	311	2,200	
	Cash	101		2,200

Requirements 2 and 3

CASH — Account No. 101

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 1		J1	78,000		78,000	
Jan. 4		J1	1,000		79,000	
Jan. 7		J1		25,000	54,000	
Jan. 15		J1		1,120	52,880	
Jan. 16		J1		600	52,280	
Jan. 18		J1	2,700		54,980	
Jan. 29		J1	1,500		56,480	
Jan. 30		J1		1,200	55,280	
Jan. 30		J1		1,120	54,160	
Jan. 31		J1		1,800	52,360	
Jan. 31		J1		2,200	50,160	

ACCOUNTS RECEIVABLE — Account No. 111

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 11		J1	400		400	
Jan. 19		J1	1,800		2,200	
Jan. 29		J1		1,500	700	

OFFICE SUPPLIES — Account No. 121

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 3		J1	600		600	

P2-31A, cont.

PREPAID INSURANCE — Account No. 131

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 30		J1	1,200		1,200	

LAND — Account No. 141

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 7		J1	25,000		25,000	

BUILDING — Account No. 151

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 7		J1	130,000		130,000	

FURNITURE — Account No. 161

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 3		J1	1,700		1,700	

ACCOUNTS PAYABLE — Account No. 201

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 3		J1		2,300		2,300
Jan. 16		J1	600			1,700

UTILITIES PAYABLE — Account No. 211

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 25		J1		600		600

NOTES PAYABLE — Account No. 221

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 7		J1		130,000		130,000

P2-31A, cont.

COMMON STOCK — Account No. 301

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 1		J1		78,000		78,000

DIVIDENDS — Account No. 311

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 31		J1	2,200		2,200	

SERVICE REVENUE — Account No. 411

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 4		J1		1,000		1,000
Jan. 11		J1		400		1,400
Jan. 18		J1		2,700		4,100
Jan. 19		J1		1,800		5,900

SALARIES EXPENSE — Account No. 511

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 15		J1	1,120		1,120	
Jan. 30		J1	1,120		2,240	

RENT EXPENSE — Account No. 521

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 31		J1	1,800		1,800	

UTILITIES EXPENSE — Account No. 531

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Jan. 25		J1	600		600	

P2-31A, cont.
Requirement 4

TERRENCE MURPHY, ATTORNEY Trial Balance January 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 50,160	
Accounts Receivable	700	
Office Supplies	600	
Prepaid Insurance	1,200	
Land	25,000	
Building	130,000	
Furniture	1,700	
Accounts Payable		$ 1,700
Utilities Payable		600
Notes Payable		130,000
Common Stock		78,000
Dividends	2,200	
Service Revenue		5,900
Salaries Expense	2,240	
Rent Expense	1,800	
Utilities Expense	600	
Total	**$ 216,200**	**$ 216,200**

P2-32A
Requirement 1

Date	**Accounts and Explanation**	**Post. Ref.**	**Debit**	**Credit**
Apr. 4	Cash	11	2,500	
	Accounts Receivable	12		2,500
	Received cash from client on account.			
8	Accounts Receivable	12	5,400	
	Service Revenue	41		5,400
	Performed tax services for client on account.			
13	Accounts Payable	21	3,000	
	Cash	11		3,000
	Paid cash on account.			

P2-32A, cont.

Apr. 14	Furniture	15	3,600	
	Accounts Payable	21		3,600
	Purchased furniture on account.			
15	Automobile	16	9,500	
	Common Stock	31		9,500
	Issued common stock in exchange for automobile.			
18	Office Supplies	13	900	
	Accounts Payable	21		900
	Purchased office supplies on account.			
19	Cash	11	2,700	
	Accounts Receivable	12		2,700
	Received cash on account.			
20	Dividends	33	6,500	
	Cash	11		6,500
	Paid cash dividends.			
21	Cash	11	5,700	
	Service Revenue	41		5,700
	Received cash for consulting work.			
24	Cash	11	2,400	
	Unearned Revenue	22		2,400
	Received payment for services to be performed next month.			
27	Rent Expense	52	600	
	Cash	11		600
	Paid office rent.			
28	Salaries Expense	51	1,700	
	Cash	11		1,700
	Paid employee salary.			

P2-32A, cont.
Requirements 2 and 3

CASH Account No. 11

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				11,000	
Apr. 4		J5	2,500		13,500	
Apr. 13		J5		3,000	10,500	
Apr. 19		J5	2,700		13,200	
Apr. 20		J5		6,500	6,700	
Apr. 21		J5	5,700		12,400	
Apr. 24		J5	2,400		14,800	
Apr. 27		J5		600	14,200	
Apr. 28		J5		1,700	12,500	

ACCOUNTS RECEIVABLE Account No. 12

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				16,500	
Apr. 4		J5		2,500	14,000	
Apr. 8		J5	5,400		19,400	
Apr. 19		J5		2,700	16,700	

OFFICE SUPPLIES Account No. 13

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				400	
Apr. 18		J5	900		1,300	

LAND Account No. 14

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				30,000	

FURNITURE Account No. 15

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 14		J5	3,600		3,600	

P2-32A, cont.

AUTOMOBILE Account No. 16

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 15		J5	9,500		9,500	

ACCOUNTS PAYABLE Account No. 21

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					3,800
Apr. 13		J5	3,000			800
Apr. 14		J5		3,600		4,400
Apr. 18		J5		900		5,300

UNEARNED REVENUE Account No. 22

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 24		J5		2,400		2,400

COMMON STOCK Account No. 31

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					52,300
Apr. 15		J5		9,500		61,800

DIVIDENDS Account No. 33

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 20		J5	6,500		6,500	

SERVICE REVENUE Account No. 41

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					8,200
Apr. 8		J5		5,400		13,600
Apr. 21		J5		5,700		19,300

P2-32A, cont.

SALARIES EXPENSE — Account No. 51

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				5,600	
Apr. 28		J5	1,700		7,300	

RENT EXPENSE — Account No. 52

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				800	
Apr. 27		J5	600		1,400	

Requirement 4

SHAWN MERRY, CPA
Trial Balance
April 30, 2018

Acct. No.	**Account Title**	**Balance** Debit	Credit
11	Cash	$ 12,500	
12	Accounts Receivable	16,700	
13	Office Supplies	1,300	
14	Land	30,000	
15	Furniture	3,600	
16	Automobile	9,500	
21	Accounts Payable		$ 5,300
22	Unearned Revenue		2,400
31	Common Stock		61,800
33	Dividends	6,500	
41	Service Revenue		19,300
51	Salaries Expense	7,300	
52	Rent Expense	1,400	
	Total	**$ 88,800**	**$ 88,800**

P2-33A

BEAUTIFUL TOTS CHILD CARE Trial Balance August 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 10,900	
Accounts Receivable	14,900	
Office Supplies	2,400	
Prepaid Insurance	4,100	
Equipment	83,000	
Accounts Payable		$ 4,800
Notes Payable		45,000
Common Stock		57,000
Dividends	3,200	
Service Revenue		16,450
Salaries Expense	3,700	
Rent Expense	750	
Advertising Expense	300	
Total	**$ 123,250**	**$ 123,250**

Explanations:

a. Increase Cash by $1,500.

b. Increase Accounts Receivable by $8,200 ($4,100 × 2).

c. Increase Office Supplies and Accounts Payable by $1,400 each.

d. Decrease Equipment by $8,500 ($91,500 − $83,000).

e. Decrease Salaries Expense by $700.

f. Advertising Expense should have a debit balance of $300. Decrease Cash by $300.

g. Dividends should decrease by $1,800 and Cash should increase by $1,800 ($2,000 − $200).

h. Service Revenue should increase by $4,100.

i. Prepaid Insurance should increase by $3,800 ($1,900 × 2).

P2-34A

Requirement 1

SARA SIMON, REGISTERED DIETICIAN Income Statement Month Ended July 31, 2018		
Revenues:		
Service Revenue		$ 17,888
Expenses:		
Salaries Expense	$ 1,700	
Rent Expense	1,100	
Utilities Expense	500	
Total Expenses		3,300
Net Income		$ 14,588

Requirement 2

SARA SIMON, REGISTERED DIETICIAN Statement of Retained Earnings Month Ended July 31, 2018	
Retained Earnings, July 1, 2018	$ 0
Net income for the month	14,588
	14,588
Dividends	(2,800)
Retained Earnings, July 31, 2018	$ 11,788

P2-34A, cont.
Requirements 3

SARA SIMON, REGISTERED DIETICIAN
Balance Sheet
July 31, 2018

Assets		Liabilities	
Cash	$ 38,000	Accounts Payable	$ 3,000
Accounts Receivable	9,000	Unearned Revenue	3,912
Office Supplies	2,300	Notes Payable	31,000
Prepaid Insurance	2,400	Total Liabilities	37,912
Equipment	16,000		
		Stockholders' Equity	
		Common Stock	18,000
		Retained Earnings	11,788
		Total Stockholders' Equity	29,788
Total Assets	$ 67,700	Total Liabilities and Stockholders' Equity	$ 67,700

Requirement 4

Debt ratio = Total liabilities / Total assets = $37,912 / $67,700 = 0.56 = 56%

Problems (Group B)

P2-35B

Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Mar. 1	Cash		62,000	
	Common Stock			62,000
5	Rent Expense		570	
	Cash			570
9	Land		14,000	
	Cash			14,000
10	Office Supplies		1,500	
	Accounts Payable			1,500
19	Cash		27,000	
	Notes Payable			27,000
22	Accounts Payable		1,400	
	Cash			1,400
28	Advertising Expense		220	
	Advertising Payable			220
31	Cash		6,700	
	Accounts Receivable		5,800	
	Service Revenue			12,500
31	Salaries Expense		2,100	
	Rent Expense		1,500	
	Utilities Expense		350	
	Cash			3,950
31	Cash		1,000	
	Unearned Revenue			1,000
31	Dividends		7,100	
	Cash			7,100

P2-35B, cont.
Requirement 2

Cash

Mar. 1	62,000	570	Mar. 5
Mar. 19	27,000	14,000	Mar. 9
Mar. 31	6,700	1,400	Mar. 22
Mar. 31	1,000	3,950	Mar. 31
		7,100	Mar. 31
Bal.	69,680		

Accounts Receivable

Mar. 31	5,800		
Bal.	5,800		

Office Supplies

Mar. 10	1,500		
Bal.	1,500		

Land

Mar. 9	14,000		
Bal.	14,000		

Accounts Payable

Mar. 22	1,400	1,500	Mar. 10
		100	Bal.

Advertising Payable

		220	Mar. 28
		220	Bal.

Unearned Revenue

		1,000	Mar. 31
		1,000	Bal.

Notes Payable

		27,000	Mar. 19
		27,000	Bal.

Common Stock

		62,000	Mar. 1
		62,000	Bal.

Dividends

Mar. 31	7,100		
Bal.	7,100		

Service Revenue

		12,500	Mar. 31
		12,500	Bal.

Salaries Expense

Mar. 31	2,100		
Bal.	2,100		

Rent Expense

Mar. 5	570		
Mar. 31	1,500		
Bal.	2,070		

Utilities Expense

Mar. 31	350		
Bal.	350		

Advertising Expense

Mar. 28	220		
Bal.	220		

P2-35B, cont.
Requirement 3

VICTOR YANG, MD Trial Balance March 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 69,680	
Accounts Receivable	5,800	
Office Supplies	1,500	
Land	14,000	
Accounts Payable		$ 100
Advertising Payable		220
Unearned Revenue		1,000
Notes Payable		27,000
Common Stock		62,000
Dividends	7,100	
Service Revenue		12,500
Salaries Expense	2,100	
Rent Expense	2,070	
Utilities Expense	350	
Advertising Expense	220	
Total	**$ 102,820**	**$ 102,820**

P2-36B
Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Nov. 1	Cash		41,000	
	Common Stock			41,000
4	Office Supplies		1,200	
	Furniture		2,300	
	Accounts Payable			3,500
6	Cash		2,100	
	Service Revenue			2,100
7	Land		27,000	
	Cash			27,000
10	Accounts Receivable		800	
	Service Revenue			800
14	Accounts Payable		2,300	
	Cash			2,300
15	Salaries Expense		1,470	
	Cash			1,470
17	Cash		500	
	Accounts Receivable			500
20	Accounts Receivable		680	
	Service Revenue			680
25	Cash		1,900	
	Unearned Revenue			1,900
28	Cash		3,100	
	Service Revenue			3,100
29	Prepaid Insurance		840	
	Cash			840
30	Salaries Expense		1,470	
	Cash			1,470
30	Rent Expense		650	
	Cash			650

P2-36B, cont.

Nov. 30	Utilities Expense		650	
	Utilities Payable			650
30	Dividends		2,800	
	Cash			2,800

Requirements 2 and 3

Cash

Nov. 1	41,000	27,000	Nov. 7
Nov. 6	2,100	2,300	Nov. 14
Nov. 17	500	1,470	Nov. 15
Nov. 25	1,900	840	Nov. 29
Nov. 28	3,100	1,470	Nov. 30
		650	Nov. 30
		2,800	Nov. 30
Bal.	12,070		

Accounts Payable

Nov. 14	2,300	3,500	Nov. 4
		1,200	Bal.

Utilities Payable

		650	Nov. 30
		650	Bal.

Accounts Receivable

Nov. 10	800	500	Nov. 17
Nov. 20	680		
Bal.	980		

Unearned Revenue

		1,900	Nov. 25
		1,900	Bal.

Office Supplies

Nov. 4	1,200		
Bal.	1,200		

Common Stock

		41,000	Nov. 1
		41,000	Bal.

Prepaid Insurance

Nov. 29	840		
Bal.	840		

Dividends

Nov. 30	2,800		
Bal.	2,800		

Land

Nov. 7	27,000		
Bal.	27,000		

Service Revenue

		2,100	Nov. 6
		800	Nov. 10
		680	Nov. 20
		3,100	Nov. 28
		6,680	Bal.

Furniture

Nov. 4	2,300		
Bal.	2,300		

Salaries Expense

Nov. 15	1,470		
Nov. 30	1,470		
Bal.	2,940		

P2-36B, cont.

Rent Expense		
Nov. 30	650	
Bal.	650	

Utilities Expense		
Nov. 30	650	
Bal.	650	

Requirement 4

BETH STEWART, DESIGNER
Trial Balance
November 30, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 12,070	
Accounts Receivable	980	
Office Supplies	1,200	
Prepaid Insurance	840	
Land	27,000	
Furniture	2,300	
Accounts Payable		$ 1,200
Utilities Payable		650
Unearned Revenue		1,900
Common Stock		41,000
Dividends	2,800	
Service Revenue		6,680
Salaries Expense	2,940	
Rent Expense	650	
Utilities Expense	650	
Total	**$ 51,430**	**$ 51,430**

P2-37B
Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Apr. 1	Cash	101	70,000	
	Common Stock	301		70,000
3	Office Supplies	121	1,100	
	Furniture	161	1,300	
	Accounts Payable	201		2,400
4	Cash	101	2,000	
	Service Revenue	411		2,000
7	Building	151	150,000	
	Land	141	30,000	
	Cash	101		40,000
	Notes Payable	221		140,000
11	Accounts Receivable	111	400	
	Service Revenue	411		400
15	Salaries Expense	511	1,200	
	Cash	101		1,200
16	Accounts Payable	201	1,100	
	Cash	101		1,100
18	Cash	101	2,700	
	Service Revenue	411		2,700
19	Accounts Receivable	111	1,700	
	Service Revenue	411		1,700
25	Utilities Expense	531	650	
	Utilities Payable	211		650
28	Cash	101	1,100	
	Accounts Receivable	111		1,100
29	Prepaid Insurance	131	3,600	
	Cash	101		3,600
29	Salaries Expense	511	1,200	
	Cash	101		1,200

P2-37B, cont.

Apr. 30	Rent Expense	521	2,100	
	Cash	101		2,100
30	Dividends	311	3,200	
	Cash	101		3,200

Requirements 2 and 3

CASH Account No. 101

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 1		J1	70,000		70,000	
Apr. 4		J1	2,000		72,000	
Apr. 7		J1		40,000	32,000	
Apr. 15		J1		1,200	30,800	
Apr. 16		J1		1,100	29,700	
Apr. 18		J1	2,700		32,400	
Apr. 28		J1	1,100		33,500	
Apr. 29		J1		3,600	29,900	
Apr. 29		J1		1,200	28,700	
Apr. 30		J1		2,100	26,600	
Apr. 30		J1		3,200	23,400	

ACCOUNTS RECEIVABLE Account No. 111

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 11		J1	400		400	
Apr. 19		J1	1,700		2,100	
Apr. 28		J1		1,100	1,000	

OFFICE SUPPLIES Account No. 121

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 3		J1	1,100		1,100	

PREPAID INSURANCE Account No. 131

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 29		J1	3,600		3,600	

P2-37B, cont.

LAND — Account No. 141

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 7		J1	30,000		30,000	

BUILDING — Account No. 151

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 7		J1	150,000		150,000	

FURNITURE — Account No. 161

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 3		J1	1,300		1,300	

ACCOUNTS PAYABLE — Account No. 201

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 3		J1		2,400		2,400
Apr. 16		J1	1,100			1,300

UTILITIES PAYABLE — Account No. 211

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 25		J1		650		650

NOTES PAYABLE — Account No. 221

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 7		J1		140,000		140,000

COMMON STOCK — Account No. 301

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 1		J1		70,000		70,000

P2-37B, cont.

DIVIDENDS — Account No. 311

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 30		J1	3,200		3,200	

SERVICE REVENUE — Account No. 411

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 4		J1		2,000		2,000
Apr. 11		J1		400		2,400
Apr. 18		J1		2,700		5,100
Apr. 19		J1		1,700		6,800

SALARIES EXPENSE — Account No. 511

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 15		J1	1,200		1,200	
Apr. 29		J1	1,200		2,400	

RENT EXPENSE — Account No. 521

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 30		J1	2,100		2,100	

UTILITIES EXPENSE — Account No. 531

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 25		J1	650		650	

P2-37B, cont.
Requirement 4

THEODORE MCMAHON, ATTORNEY Trial Balance April 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 23,400	
Accounts Receivable	1,000	
Office Supplies	1,100	
Prepaid Insurance	3,600	
Land	30,000	
Building	150,000	
Furniture	1,300	
Accounts Payable		$ 1,300
Utilities Payable		650
Notes Payable		140,000
Common Stock		70,000
Dividends	3,200	
Service Revenue		6,800
Salaries Expense	2,400	
Rent Expense	2,100	
Utilities Expense	650	
Total	**$ 218,750**	**$ 218,750**

P2-38B
Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Apr. 4	Cash	11	6,000	
	Accounts Receivable	12		6,000
	Received cash from client on account.			
8	Accounts Receivable	12	5,500	
	Service Revenue	41		5,500
	Performed tax services for client on account.			
13	Accounts Payable	21	3,300	
	Cash	11		3,300
	Paid cash on account.			
14	Furniture	15	4,000	
	Accounts Payable	21		4,000
	Purchased furniture on account.			
15	Automobile	16	11,500	
	Common Stock	31		11,500
	Issued common stock in exchange for automobile.			
18	Office Supplies	13	1,600	
	Accounts Payable	21		1,600
	Purchased office supplies on account.			
19	Cash	11	2,750	
	Accounts Receivable	12		2,750
	Received cash on account.			
20	Dividends	33	7,500	
	Cash	11		7,500
	Paid cash dividends to stockholders.			
21	Cash	11	4,900	
	Service Revenue	41		4,900
	Received cash for consulting work.			
24	Cash	11	2,500	
	Unearned Revenue	22		2,500
	Received payment for services to be performed next month.			

P2-38B, cont.

Apr. 27	Rent Expense	52	900	
	Cash	11		900
	Paid office rent.			
28	Salaries Expense	51	1,200	
	Cash	11		1,200
	Paid employee salary.			

Requirements 2 and 3

CASH Account No. 11

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				17,000	
Apr. 4		J5	6,000		23,000	
Apr. 13		J5		3,300	19,700	
Apr. 19		J5	2,750		22,450	
Apr. 20		J5		7,500	14,950	
Apr. 21		J5	4,900		19,850	
Apr. 24		J5	2,500		22,350	
Apr. 27		J5		900	21,450	
Apr. 28		J5		1,200	20,250	

ACCOUNTS RECEIVABLE Account No. 12

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				10,500	
Apr. 4		J5		6,000	4,500	
Apr. 8		J5	5,500		10,000	
Apr. 19		J5		2,750	7,250	

OFFICE SUPPLIES Account No. 13

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				1,200	
Apr. 18		J5	1,600		2,800	

P2-38B, cont.

LAND Account No. 14

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				29,000	

FURNITURE Account No. 15

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 14		J5	4,000		4,000	

AUTOMOBILE Account No. 16

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 15		J5	11,500		11,500	

ACCOUNTS PAYABLE Account No. 21

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					3,800
Apr. 13		J5	3,300			500
Apr. 14		J5		4,000		4,500
Apr. 18		J5		1,600		6,100

UNEARNED REVENUE Account No. 22

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 24		J5		2,500		2,500

COMMON STOCK Account No. 31

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					46,200
Apr. 15		J5		11,500		57,700

DIVIDENDS Account No. 33

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Apr. 20		J5	7,500		7,500	

P2-38B, cont.

SERVICE REVENUE — Account No. 41

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance					11,200
Apr. 8		J5		5,500		16,700
Apr. 21		J5		4,900		21,600

SALARIES EXPENSE — Account No. 51

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				2,500	
Apr. 28		J5	1,200		3,700	

RENT EXPENSE — Account No. 52

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
Mar. 31	Balance				1,000	
Apr. 27		J5	900		1,900	

Requirement 4

JOHN MENNING, CPA
Trial Balance
April 30, 2018

Acct. No.	**Account Title**	**Balance** Debit	Credit
11	Cash	$ 20,250	
12	Accounts Receivable	7,250	
13	Office Supplies	2,800	
14	Land	29,000	
15	Furniture	4,000	
16	Automobile	11,500	
21	Accounts Payable		$ 6,100
22	Unearned Revenue		2,500
31	Common Stock		57,700
33	Dividends	7,500	
41	Service Revenue		21,600
51	Salaries Expense	3,700	
52	Rent Expense	1,900	
	Total	**$ 87,900**	**$ 87,900**

P2-39B

LOVE TO LEARN CHILD CARE Trial Balance May 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 11,000	
Accounts Receivable	16,300	
Office Supplies	2,000	
Prepaid Insurance	4,500	
Equipment	82,500	
Accounts Payable		$ 4,000
Notes Payable		45,000
Common Stock		54,000
Dividends	2,300	
Service Revenue		20,300
Salaries Expense	4,000	
Rent Expense	400	
Advertising Expense	300	
Total	**$ 123,300**	**$ 123,300**

Explanations:

a. Increase Cash by $1,800.

b. Increase Accounts Receivable by $7,600 ($3,800 × 2).

c. Increase Office Supplies and Accounts Payable by $1,000 each.

d. Decrease Equipment by $7,900 ($90,400 − $82,500).

e. Decrease Salaries Expense by $350.

f. Advertising Expense should have a debit balance of $300. Decrease Cash by $300.

g. Dividends should decrease by $1,440 and Cash should increase by $1,440 ($1,600 − $160).

h. Service Revenue should increase by $4,000.

i. Prepaid Insurance should increase by $2,800 ($1,400 × 2).

P2-40B

Requirement 1

SHEILA SANCHEZ, REGISTERED DIETICIAN Income Statement Month Ended July 31, 2018		
Revenues:		
Service Revenue		$ 15,804
Expenses:		
Salaries Expense	$ 1,600	
Rent Expense	700	
Utilities Expense	100	
Total Expenses		2,400
Net Income		$ 13,404

Requirement 2

SHEILA SANCHEZ, REGISTERED DIETICIAN Statement of Retained Earnings Month Ended July 31, 2018	
Retained Earnings, July 1, 2018	$ 0
Net income for the month	13,404
	13,404
Dividends	(3,000)
Retained Earnings, July 31, 2018	$ 10,404

P2-40B, cont.
Requirement 3

SHEILA SANCHEZ, REGISTERED DIETICIAN
Balance Sheet
July 31, 2018

Assets		Liabilities	
Cash	$ 32,000	Accounts Payable	$ 3,400
Accounts Receivable	9,100	Unearned Revenue	1,296
Office Supplies	1,400	Notes Payable	34,000
Prepaid Insurance	2,600	Total Liabilities	$ 38,696
Equipment	24,000		
		Stockholders' Equity	
		Common Stock	20,000
		Retained Earnings	10,404
		Total Stockholders' Equity	30,404
Total Assets	$ 69,100	Total Liabilities and Stockholders' Equity	$ 69,100

Requirement 4

Debt ratio = Total liabilities / Total assets = $38,696 / $69,100 = 0.56 = 56%

Using Excel

P2-41

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is located in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P2-42

Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Nov. 1	Cash		16,000	
	Common Stock			16,000
2	Rent Expense		1,200	
	Cash			1,200
3	Canoes		4,800	
	Accounts Payable			4,800
4	Office Supplies		750	
	Accounts Payable			750
7	Cash		1,400	
	Canoe Rental Revenue			1,400
13	Wages Expense		1,500	
	Cash			1,500
15	Dividends		50	
	Cash			50
16	Utilities Expense		150	
	Utilities Payable			150
20	Telephone Expense		175	
	Telephone Payable			175
22	Accounts Receivable		3,000	
	Canoe Rental Revenue			3,000
26	Accounts Payable		1,000	
	Cash			1,000
28	Cash		750	
	Accounts Receivable			750
30	Dividends		100	
	Cash			100

P2-42, cont.

Requirement 1, cont.

Dec. 1	Land		85,000	
	Building		35,000	
	Common Stock			120,000
1	Prepaid Rent		3,000	
	Cash			3,000
2	Canoes		7,200	
	Notes Payable			7,200
4	Office Supplies		500	
	Accounts Payable			500
9	Cash		4,500	
	Canoe Rental Revenue			4,500
15	Accounts Receivable		3,500	
	Canoe Rental Revenue			3,500
16	Cash		750	
	Unearned Revenue			750
18	Utilities Payable		150	
	Telephone Payable		175	
	Cash			325
19	Accounts Payable		2,000	
	Cash			2,000
20	Telephone Expense		325	
	Utilities Expense		295	
	Telephone Payable			325
	Utilities Payable			295
31	Wages Expense		1,800	
	Cash			1,800
31	Dividends		300	
	Cash			300

P2-42, cont.
Requirements 2 and 3

Cash

Nov. 1	16,000	1,200	Nov. 2
Nov. 7	1,400	1,500	Nov. 13
Nov. 28	750	50	Nov. 15
Dec. 9	4,500	1,000	Nov. 26
Dec. 16	750	100	Nov. 30
		3,000	Dec. 1
		325	Dec. 18
		2,000	Dec. 19
		1,800	Dec. 31
		300	Dec. 31
Balance	12,125		

Accounts Payable

Nov. 26	1,000	4,800	Nov. 3
Dec. 19	2,000	750	Nov. 4
		500	Dec. 4
		3,050	Balance

Accounts Receivable

Nov. 22	3,000	750	Nov. 28
Dec. 15	3,500		
Balance	5,750		

Utilities Payable

Dec. 18	150	150	Nov. 16
		295	Dec. 20
		295	Balance

Office Supplies

Nov. 4	750		
Dec. 4	500		
Balance	1,250		

Telephone Payable

Dec. 18	175	175	Nov. 20
		325	Dec. 20
		325	Balance

Prepaid Rent

Dec. 1	3,000		
Balance	3,000		

Unearned Revenue

		750	Dec. 16
		750	Balance

Land

Dec. 1	85,000		
Balance	85,000		

Notes Payable

		7,200	Dec. 2
		7,200	Balance

Building

Dec. 1	35,000		
Balance	35,000		

Common Stock

		16,000	Nov. 1
		120,000	Dec. 1
		136,000	Balance

Canoes

Nov. 3	4,800		
Dec. 2	7,200		
Balance	12,000		

Dividends

Nov. 15	50		
Nov. 30	100		
Dec. 31	300		
Balance	450		

P2-42, cont.
Requirements 2 and 3, cont.

Canoe Rental Revenue

		1,400	Nov. 7
		3,000	Nov. 22
		4,500	Dec. 9
		3,500	Dec. 15
		12,400	Balance

Rent Expense

Nov. 2	1,200		
Balance	1,200		

Wages Expense

Nov. 13	1,500		
Dec. 31	1,800		
Balance	3,300		

Utilities Expense

Nov. 16	150		
Dec. 20	295		
Balance	445		

Telephone Expense

Nov. 20	175		
Dec. 20	325		
Balance	500		

P2-42, cont.
Requirement 4

CANYON CANOE COMPANY Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 12,125	
Accounts Receivable	5,750	
Office Supplies	1,250	
Prepaid Rent	3,000	
Land	85,000	
Building	35,000	
Canoes	12,000	
Accounts Payable		$ 3,050
Utilities Payable		295
Telephone Payable		325
Unearned Revenue		750
Notes Payable		7,200
Common Stock		136,000
Dividends	450	
Canoe Rental Revenue		12,400
Rent Expense	1,200	
Wages Expense	3,300	
Utilities Expense	445	
Telephone Expense	500	
Total	**$ 160,020**	**$ 160,020**

Requirement 5

CANYON CANOE COMPANY Income Statement Two Months Ended December 31, 2018		
Revenues:		
Canoe Rental Revenue		$ 12,400
Expenses:		
Wages Expense	$ 3,300	
Rent Expense	1,200	
Telephone Expense	500	
Utilities Expense	445	
Total Expenses		5,445
Net Income		$ 6,955

P2-42, cont.
Requirement 6

CANYON CANOE COMPANY Statement of Retained Earnings Two Months Ended December 31, 2018	
Retained Earnings, November 1, 2018	$ 0
Net income for the month	6,955
	6,955
Dividends	(450)
Retained Earnings, December 31, 2018	$ 6,505

Requirement 7

CANYON CANOE COMPANY Balance Sheet December 31, 2018			
Assets		Liabilities	
Cash	$ 12,125	Accounts Payable	$ 3,050
Accounts Receivable	5,750	Utilities Payable	295
Office Supplies	1,250	Telephone Payable	325
Prepaid Rent	3,000	Unearned Revenue	750
Land	85,000	Notes Payable	7,200
Building	35,000	Total Liabilities	11,620
Canoes	12,000		
		Stockholders' Equity	
		Common Stock	136,000
		Retained Earnings	6,505
		Total Stockholders' Equity	142,505
Total Assets	$ 154,125	Total Liabilities and Stockholders' Equity	$ 154,125

Requirement 8

Debt ratio = Total liabilities / Total assets = $11,620 / $154,125 = 0.075* = 7.5%

* rounded

Practice Set

P2-43
Requirement 1

Date	Accounts and Explanation	Posting Ref.	Debit	Credit
Nov. 1	Cash		15,000	
	Truck		3,000	
	Common Stock			18,000
2	Prepaid Rent		4,000	
	Cash			4,000
3	Prepaid Insurance		4,800	
	Cash			4,800
4	Cleaning Supplies		320	
	Accounts Payable			320
5	Equipment		1,500	
	Accounts Payable			1,500
7	Equipment		3,900	
	Cash			3,900
9	Accounts Receivable		4,700	
	Service Revenue			4,700
10	Cash		200	
	Accounts Receivable			200
15	Salaries Expense		400	
	Cash			400
16	Cash		15,000	
	Unearned Revenue			15,000
17	Cash		400	
	Service Revenue			400
18	Utilities Expense		175	
	Accounts Payable			175
20	Cash		36,000	
	Notes Payable			36,000

P2-43, cont.

Nov. 21	Cash		500	
	Accounts Receivable			500
25	Accounts Payable		750	
	Cash			750
29	Advertising Expense		200	
	Cash			200
30	Dividends		1,400	
	Cash			1,400

Requirements 2 and 3

Cash

Nov. 1	15,000	4,000	Nov. 2
Nov. 10	200	4,800	Nov. 3
Nov. 16	15,000	3,900	Nov. 7
Nov. 17	400	400	Nov. 15
Nov. 20	36,000	750	Nov. 25
Nov. 21	500	200	Nov. 29
		1,400	Nov. 30
Balance	51,650		

Accounts Payable

Nov. 25	750	320	Nov. 4
		1,500	Nov. 5
		175	Nov. 18
		1,245	Balance

Accounts Receivable

Nov. 9	4,700	200	Nov. 10
		500	Nov. 21
Balance	4,000		

Unearned Revenue

		15,000	Nov. 16
		15,000	Balance

Cleaning Supplies

Nov. 4	320		
Balance	320		

Notes Payable

		36,000	Nov. 20
		36,000	Balance

Prepaid Rent

Nov. 2	4,000		
Balance	4,000		

Common Stock

		18,000	Nov. 1
		18,000	Balance

Prepaid Insurance

Nov. 3	4,800		
Balance	4,800		

Dividends

Nov. 30	1,400		
Balance	1,400		

P2-43, cont.
Requirements 2 and 3

Equipment

Nov. 5	1,500	
Nov. 7	3,900	
Balance	5,400	

Truck

Nov. 1	3,000	
Balance	3,000	

Service Revenue

	4,700	Nov. 9
	400	Nov. 17
	5,100	Balance

Salaries Expense

Nov. 15	400	
Balance	400	

Advertising Expense

Nov. 29	200	
Balance	200	

Utilities Expense

Nov. 18	175	
Balance	175	

P2-43, cont.
Requirement 4

CRYSTAL CLEAR CLEANING Trial Balance November 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 51,650	
Accounts Receivable	4,000	
Cleaning Supplies	320	
Prepaid Rent	4,000	
Prepaid Insurance	4,800	
Equipment	5,400	
Truck	3,000	
Accounts Payable		$ 1,245
Unearned Revenue		15,000
Notes Payable		36,000
Common Stock		18,000
Dividends	1,400	
Service Revenue		5,100
Salaries Expense	400	
Advertising Expense	200	
Utilities Expense	175	
Total	**$ 75,345**	**$ 75,345**

Critical Thinking

Tying It All Together Case 2-1
Requirement 1

Fry's Electronics would record the following journal entry:

Date	Accounts and Explanation	Debit	Credit
	Cash	10,500	
	Service Revenue		10,500

The transaction would increase assets (Cash) and equity (Retained Earnings) on the balance sheet and increase Service Revenue on the income statement.

Requirement 2

Fry's Electronics would record the following journal entry:

Date	Accounts and Explanation	Debit	Credit
	Cash	24,000	
	Unearned Revenue		24,000

The transaction would increase assets (Cash) and increase liabilities (Unearned Revenue) on the balance sheet.

Requirement 3

In requirement 1, Fry's Electronics recorded revenue because the company had received the cash from the customer and provided the service. In requirement 2, Fry's Electronics recorded a liability, Unearned Revenue, because even though cash was received, the service has not been provided. The revenue related to requirement 2 will not be recorded until the service has been provided.

Decision Case 2-1
Requirements 1 and 2

Cash			
a.	10,000	300	b.
f.	1,200	2,400	d.
Bal.	8,500		

Accounts Payable			
		700	c.
		700	Bal.

Accounts Receivable			
e.	8,800	1,200	f.
Bal.	7,600		

Common Stock			
		10,000	a.
		10,000	Bal.

Office Supplies			
b.	300		
Bal.	300		

Service Revenue			
		8,800	e.
		8,800	Bal.

Salaries Expense			
d.	1,400		
Bal.	1,400		

Rent Expense			
d.	1,000		
Bal.	1,000		

Advertising Expense			
c.	700		
Bal.	700		

Decision Case 2-1, cont.
Requirement 3

A-PLUS TRAVEL PLANNERS Trial Balance June 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 8,500	
Accounts Receivable	7,600	
Office Supplies	300	
Accounts Payable		$ 700
Common Stock		10,000
Service Revenue		8,800
Salaries Expense	1,400	
Rent Expense	1,000	
Advertising Expense	700	
Total	**$ 19,500**	**$ 19,500**

Requirement 4

Revenues:		
Service Revenue		$ 8,800
Expenses:		
Salaries Expense	$ 1,400	
Rent Expense	1,000	
Advertising Expense	700	
Total Expenses		3,100
Net Income		$ 5,700

McChesney should discontinue the business because net income falls below the target amount.

Ethical Issue 2-1

The bank has a standing agreement with Better Days Ahead for overdrafts, so as long as transactions are compliant with terms of the agreement, there is no ethical issue. The exercise refers to Better Days Ahead managing funds "wisely." However, whether funds are managed wisely or not is a matter of prudent business management and not an ethical issue. Presumably if Better Days Ahead was exceeding the terms of the agreement, the bank would cancel the arrangement.

Ethical Issue 2-1, cont.

Some students may point out that the agreement was for times when donations were running low, whereas the reasons given for the overdraft are for expansion and fundraising. If this is interpreted to mean that Better Days Ahead is abusing the privilege according to the terms of the agreement, then there may be an ethical issue involved, but that is not made clear by the information given.

Students may approve of Henson's cash management if the arrangement is beneficial to Better Days Ahead, and thus helps them accomplish their charitable mission more effectively. Students may disapprove of Henson's cash management if (a) they feel it is "unwise" (poor business management), or (b) if they believe he is exceeding the terms of the agreement.

Fraud Case 2-1
Requirement 1
By changing an expense to an asset, the total expenses will decrease and net income will increase.

Requirement 2
The CEO gained by earning a bonus, and the accounting manager may have gained by getting favorable treatment from the CEO. The shareholders of the company lost, because the company paid out the bonus under fraudulent conditions.

Financial Statement Case 2-1
Requirement 1

Debt ratio = Total liabilities / Total assets
= $27,305 (in millions) / $40,262 (in millions)
= 0.678* = 67.8%
* rounded

Requirement 2

Target's debt ratio is significantly higher than Kohl's (59.6%).

Communication Activity 2-1

Debits are on the left, credits are on the right. Normal balance for assets, expenses, and dividends is a debit. For liability, common stock, and revenue accounts, the normal balance is a credit.

The Adjusting Process

3

Where's My Bonus?

Liam Mills was surprised when he opened his mail. He had just received his most recent quarterly bonus check from his employer, Custom Marketing, and the check was smaller than he expected. Liam worked as a sales manager and was responsible for product marketing and implementation in the southwest region of the United States. He was paid a monthly salary but also received a 3% bonus for all revenue generated from advertising services provided to customers in his geographical area. He was counting on his fourth quarter (October–December) bonus check to be large enough to pay off the credit card debt he had accumulated over the holiday break. It had been a great year-end for Liam. He had closed several open accounts, successfully signing several annual advertising contracts. In addition, because of his negotiating skills, he was able to collect half of the payments for services up front instead of waiting for his customers to pay every month. Liam expected that his bonus check would be huge because of this new business, but it wasn't.

The next day, Liam stopped by the accounting office to discuss his bonus check. He was surprised to learn that his bonus was calculated by the revenue earned by his company through December 31. Although Liam had negotiated to receive half of the payments up front, the business had not yet earned the revenue from those payments. Custom Marketing will not record revenue earned until the advertising services have been performed. Eventually Liam will see the new business reflected in his bonus check, but he'll have to wait until the revenue has been earned.

How Was Revenue Earned Calculated?

At the end of a time period (often December 31), companies are required to accurately report revenues earned and expenses incurred during that time period. In order to do this, the company reviews the account balances as of the end of the time period and determines whether any adjustments are needed. For example, **iHeartMedia, Inc.,** a company that has three distinct business segments: iHeartMedia, Americas Outdoor Advertising, and International Outdoor Advertising, must determine the amount of revenue earned from open advertising contracts. These contracts can cover only a few weeks or as long as several years. Only the amount earned in the current time period is reported as revenue on the income statement. *Adjusting the books* is the process of reviewing and adjusting the account balances so that amounts on the financial statements are reported accurately. This is what we will learn in this chapter.

Chapter 3 Learning Objectives

1 Differentiate between cash basis accounting and accrual basis accounting

2 Define and apply the time period concept, revenue recognition, and matching principles

3 Explain the purpose of and journalize and post adjusting entries

4 Explain the purpose of and prepare an adjusted trial balance

5 Identify the impact of adjusting entries on the financial statements

6 Explain the purpose of a worksheet and use it to prepare adjusting entries and the adjusted trial balance

7 Understand the alternative treatments of recording deferred expenses and deferred revenues (Appendix 3A)

In Chapter 1, we introduced you to the accounting equation and the financial statements. In Chapter 2, you learned about T-accounts, debits, credits, and the trial balance. But have you captured all the transactions for a particular period? Not yet.

In this chapter, we continue our exploration of the accounting cycle by learning how to update the accounts at the end of the period. This process is called adjusting the books, and it requires special journal entries called *adjusting entries*. For example, you learn how, at the end of a particular period, you must determine how many office supplies you have used and how much you owe your employees—and make adjusting entries to account for these amounts. These are just some of the adjusting entries you need to make before you can see the complete picture of how well your company performed during a period of time.

Learning Objective 1
Differentiate between cash basis accounting and accrual basis accounting

Cash Basis Accounting
Accounting method that records revenues only when cash is received and expenses only when cash is paid.

Accrual Basis Accounting
Accounting method that records revenues when earned and expenses when incurred.

WHAT IS THE DIFFERENCE BETWEEN CASH BASIS ACCOUNTING AND ACCRUAL BASIS ACCOUNTING?

There are two ways to record transactions—cash basis accounting or accrual basis accounting.

- **Cash basis accounting** records only transactions with cash: cash receipts and cash payments. When cash is received, revenues are recorded. When cash is paid, expenses are recorded. As a result, revenues are recorded only when cash is received and expenses are recorded only when cash is paid. The cash basis of accounting is not allowed under Generally Accepted Accounting Principles (GAAP); however, small businesses will sometimes use this method. **The cash method is an easier accounting method to follow because it generally requires less knowledge of accounting concepts and principles. The cash basis accounting method also does a good job of tracking a business's cash flows**.
- **Accrual basis accounting** records the effect of each transaction as it occurs—that is, revenues are recorded when earned and expenses are recorded when incurred. Revenues are considered to be earned when the services or goods are provided to the customers. Most businesses use the accrual basis as covered in this book. The accrual basis of accounting provides a better picture of a business's revenues and expenses. It records revenue only when it has been earned and expenses only when they have been incurred. Under accrual basis accounting, it is irrelevant when cash is received or paid.

If cash basis accounting is not allowed by GAAP, why would a business choose to use this method?

Example: Suppose on May 1, Smart Touch Learning paid $1,200 for insurance for the next six months ($200 per month). This prepayment represents insurance coverage for May through October. Under the cash basis method, Smart Touch Learning would record Insurance Expense of $1,200 on May 1. This is because the cash basis method records an expense when cash is paid. Alternatively, accrual basis accounting requires the company to prorate the expense. Smart Touch Learning would record a $200 expense every month from May through October. This is illustrated as follows:

	Cash basis		Accrual basis	
Cash Payment Made	May 1:	$ 1,200	May 1:	$ 1,200
Expense Recorded	May 1:	$ 1,200	May 31:	$ 200
			June 30:	200
			July 31:	200
			August 31:	200
			September 30:	200
			October 31:	200
Total Expense Recorded		$ 1,200		$ 1,200

Now let's see how the cash basis and the accrual basis methods account for revenues.

Example: Suppose on April 30, Smart Touch Learning received $600 for services to be performed for the next six months (May through October). Under the cash basis method, Smart Touch Learning would record $600 of revenue when the cash is received on April 30. The accrual basis method, though, requires the revenue to be recorded only when it is earned. Smart Touch Learning would record $100 of revenue each month for the next six months beginning in May.

	Cash basis		Accrual basis	
Cash Received	April 30:	$ 600	April 30:	$ 600
Revenue Recorded	April 30:	$ 600	May 31:	$ 100
			June 30:	100
			July 31:	100
			August 31:	100
			September 30:	100
			October 31:	100
Total Revenue Recorded		$ 600		$ 600

Notice that under both methods, cash basis and accrual basis, the total amount of revenues and expenses recorded by October 31 was the same. The major difference between a cash basis accounting system and an accrual basis accounting system is the timing of recording the revenue or expense.

Try It!

Total Pool Services earned $130,000 of service revenue during 2018. Of the $130,000 earned, the business received $105,000 in cash. The remaining amount, $25,000, was still owed by customers as of December 31. In addition, Total Pool Services incurred $85,000 of expenses during the year. As of December 31, $10,000 of the expenses still needed to be paid. In addition, Total Pool Services prepaid $5,000 cash in December 2018 for expenses incurred during the next year.

1. Determine the amount of service revenue and expenses for 2018 using a cash basis accounting system.
2. Determine the amount of service revenue and expenses for 2018 using an accrual basis accounting system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S3-1 and S3-2. MyAccountingLab

WHAT CONCEPTS AND PRINCIPLES APPLY TO ACCRUAL BASIS ACCOUNTING?

Learning Objective 2
Define and apply the time period concept, revenue recognition, and matching principles

As we have seen, the timing and recognition of revenues and expenses are the key differences between the cash basis and accrual basis methods of accounting. These differences can be explained by understanding the time period concept and the revenue recognition and matching principles.

The Time Period Concept

Smart Touch Learning will know with 100% certainty how well it has operated only if the company sells all of its assets, pays all of its liabilities, and gives any leftover cash to its stockholders. For obvious reasons, it is not practical to measure income this way. Because businesses need periodic reports on their affairs, the **time period concept** assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

Time Period Concept
Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

The basic accounting period is one year, and most businesses prepare annual financial statements. The 12-month accounting period used for the annual financial statements is called a **fiscal year**. For most companies, the annual accounting period is the calendar year, from January 1 through December 31. Other companies use a fiscal year that ends on a date other than December 31. The year-end date is usually the low point in business activity for the year. Retailers are a notable example. For instance, Wal-Mart Stores, Inc., and J. C. Penney Company, Inc., use a fiscal year that ends around January 31 because the low point of their business activity comes about a month after the holidays.

Fiscal Year
An accounting year of any 12 consecutive months that may or may not coincide with the calendar year.

The Revenue Recognition Principle

Revenue Recognition Principle
Requires companies to record revenue when (or as) the entity satisfies each performance obligation.

The **revenue recognition principle**[1] tells accountants when to record revenue and requires companies follow a five step process:

Step 1: Identify the contract with the customer. A contract is an agreement between two or more parties that creates enforceable rights and obligations.

Step 2: Identify the performance obligations in the contract. A performance obligation is a contractual promise with a customer to transfer a distinct good or service.

[1] On May 28, 2014, the FASB and IASB issued new guidance on accounting for revenue recognition, *Revenue from Contracts with Customers (Topic 606)*. This new standard will become effective for public business entities with annual reporting periods beginning after December 15, 2017.

A contract might have multiple performance obligations.[2] For example, AT&T, Inc. often provides a new phone to customers who sign a two-year cellular service agreement. This represents two distinct performance obligations: the cellular service agreement and the new phone.

Step 3: Determine the transaction price. The transaction price is the amount that the entity expects to be entitled to as a result of transferring goods or services to the customer.

Step 4: Allocate the transaction price to the performance obligations in the contract. If the transaction has multiple performance obligations, the transaction price will need to be allocated among the different performance obligations.

Step 5: Recognize revenue when (or as) the entity satisfies each performance obligation. The business will recognize revenue when (or as) it satisfies each performance obligation by transferring a good or service to a customer. A good or service is considered transferred when the customer obtains control of the good or service. The amount of revenue recognized is the amount allocated to the satisfied performance obligation.

The Matching Principle

The **matching principle** (sometimes called the *expense recognition principle*) guides accounting for expenses and ensures the following:

- All expenses are recorded when they are incurred during the period.
- Expenses are matched against the revenues of the period.

Matching Principle
Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period.

To match expenses against revenues means to subtract expenses incurred during one month from revenues earned during that same month. The goal is to compute an accurate net income or net loss for the time period.

There is a natural link between some expenses and revenues. For example, Smart Touch Learning pays a commission to the employee who sells the e-learning company's services. The commission expense is directly related to the e-learning company's revenue earned. Other expenses are not so easy to link to revenues. For example, Smart Touch Learning's monthly rent expense occurs regardless of the revenues earned that month. The matching principle tells us to identify those expenses with a particular period, such as a month or a year, when the related revenue occurred. The business will record rent expense each month based on the rental agreement.

Try It!

Match the accounting terminology to the definitions.

3. Time period concept	**a.** Requires companies to record revenue when it satisfies each performance obligation.
4. Revenue recognition principle	**b.** Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods.
5. Matching principle	**c.** Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S3-3 and S3-4. MyAccountingLab

[2] Revenue recognition for multiple performance obligations will be discussed in Chapter 5, Appendix 5B.

WHAT ARE ADJUSTING ENTRIES, AND HOW DO WE RECORD THEM?

Learning Objective 3
Explain the purpose of and journalize and post adjusting entries

The end-of-period process begins with the trial balance, which you learned how to prepare in the previous chapter. Exhibit 3-1 is the unadjusted trial balance of Smart Touch Learning at December 31, 2018.

Exhibit 3-1 | **Unadjusted Trial Balance**

SMART TOUCH LEARNING
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Land	20,000	
Building	60,000	
Furniture	18,000	
Accounts Payable		$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	$ 125,400	$ 125,400

This *unadjusted trial balance* lists the revenues and expenses of the e-learning company for November and December. But these amounts are incomplete because they omit various revenue and expense transactions. Accrual basis accounting requires the business to review the unadjusted trial balance and determine whether any additional revenues and expenses need to be recorded. Are there revenues that Smart Touch Learning has earned that haven't been recorded yet? Are there expenses that have occurred that haven't been journalized?

For example, consider the Office Supplies account in Exhibit 3-1. Smart Touch Learning uses office supplies during the two months. This reduces the office supplies on hand (an asset) and creates an expense (Supplies Expense). It is a waste of time to record Supplies Expense every time office supplies are used. But by December 31, enough of the $500 of Office Supplies on the unadjusted trial balance (Exhibit 3-1) have probably been used that we need to adjust the Office Supplies account. This is an example of why we need to adjust some accounts at the end of the accounting period.

An **adjusting entry** is completed at the end of the accounting period and records revenues to the period in which they are earned and expenses to the period in which they occur. Adjusting entries also update the asset and liability accounts. Adjustments are needed to properly measure several items such as:

Adjusting Entry
An entry made at the end of the accounting period that is used to record revenues to the period in which they are earned and expenses to the period in which they occur.

1. Net income (loss) on the income statement
2. Assets and liabilities on the balance sheet

There are two basic categories of adjusting entries: *deferrals* and *accruals*. In a deferral adjustment, the cash payment occurs before an expense is incurred or the cash receipt occurs before the revenue is earned. Deferrals defer the recognition of revenue or expense to a date after the cash is received or paid. Accrual adjustments are the opposite. An accrual records an expense before the cash is paid, or it records the revenue before the cash is received.

The two basic categories of adjusting entries can be further separated into four types:

1. Deferred expenses (deferral)
2. Deferred revenues (deferral)
3. Accrued expenses (accrual)
4. Accrued revenues (accrual)

The focus of this chapter is on learning how to account for these four types of adjusting entries.

Deferred Expenses

Deferred expenses, also called prepaid expenses, are advance payments of future expenses. They are deferrals because the expense is not recognized at the time of payment but deferred until they are used up. Such payments are considered assets rather than expenses until they are used up. When the prepayment is used up, the used portion of the asset becomes an expense via an adjusting entry.

Deferred Expense
An asset created when a business makes advance payments of future expenses.

Prepaid Rent

Remember Transaction 10 in Chapter 2? Smart Touch Learning prepaid three months' office rent of \$3,000 (\$1,000 per month × 3 months) on December 1, 2018. The entry to record the payment was as follows:

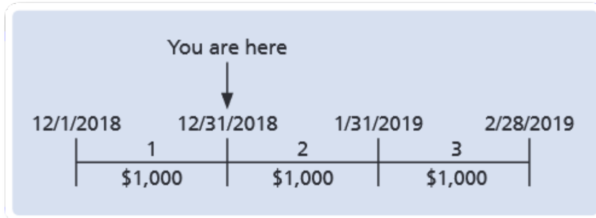
Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
	Paid rent in advance.		

A↑↓	=	L	+	E
Prepaid Rent↑ Cash↓				

After posting, Prepaid Rent has a \$3,000 debit balance.

Prepaid Rent		
Dec. 1	3,000	

Throughout December, Prepaid Rent maintains this balance. But $3,000 is *not* the amount of Prepaid Rent for the balance sheet at December 31. Why?



As of December 31, Prepaid Rent should be decreased for the amount that has been used up. The used-up portion is one month of the three months prepaid, or one-third of the prepayment. Recall that an asset that has expired is an *expense*. The adjusting entry transfers $1,000 ($3,000 × 1/3) from Prepaid Rent to Rent Expense. The adjusting entry is as follows:

A↓	=	L	+	E↓
Prepaid Rent↓				Rent Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Rent Expense	1,000	
	Prepaid Rent		1,000
	To record rent expense.		

After posting, Prepaid Rent and Rent Expense show correct ending balances:

Prepaid Rent			
Dec. 1	3,000	1,000	Dec. 31
Bal.	2,000		

Rent Expense		
Nov. 15	2,000	
Dec. 31	1,000	
Bal.	3,000	

Prepaid Rent is an example of an asset that was overstated prior to journalizing and posting the adjusting entry. Notice that the ending balance in Prepaid Rent is now $2,000. Because Prepaid Rent is an asset account for Smart Touch Learning, it should contain only two more months of rent on December 31 (for January and February). So we have $1,000 rent per month times two months equals the $2,000 Prepaid Rent balance.

If Smart Touch Learning had prepaid insurance, the same type of analysis would apply to the prepayment of three months of insurance. The only difference is in the account titles. Prepaid Insurance would be used instead of Prepaid Rent, and Insurance Expense would be used instead of Rent Expense.

Office Supplies

Office supplies are also accounted for as prepaid expenses. Let's look at another example. On November 3, Smart Touch Learning purchased $500 of office supplies on account.

The December 31 unadjusted trial balance, therefore, still lists Office Supplies with a $500 debit balance. But Smart Touch Learning's December 31 balance sheet should *not* report office supplies of $500. Why not?

During November and December, the e-learning company used office supplies to conduct business. The cost of the supplies used becomes *Supplies Expense*. To measure Supplies Expense, the business first counts the office supplies on hand at the end of December. This

is the amount of the asset still owned by the business. Assume that office supplies costing $100 remain on December 31. Then the business uses the Office Supplies T-account to determine the value of the supplies that were used:

Amount of office supplies remaining

Office Supplies			
Nov. 3	500	?	
Bal.	100		

Amount of office supplies used = Supplies Expense

So, we can solve for the office supplies used as follows:

$$\text{Office Supplies balance before adjustment} - \text{Office supplies used} = \text{Office supplies on hand}$$
$$\$500 - \text{Office supplies used} = \$100$$
$$\text{Office supplies used} = \$400$$

The December 31 adjusting entry updates Office Supplies and records Supplies Expense for November and December as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Supplies Expense	400	
	Office Supplies		400
	To record office supplies used.		

A↓ = L + E↓
Office Supplies↓ = Supplies Expense↑

After posting the adjusting entry, the December 31 balance of Office Supplies is correctly reflected as $100 and the Supplies Expense is correctly reflected as $400.

Office Supplies			
Nov. 3	500	400	Dec. 31
Bal.	100		

Supplies Expense		
Dec. 31	400	
Bal.	400	

The Office Supplies account then enters January with a $100 balance. If the adjusting entry for Office Supplies had not been recorded, the asset would have been overstated and Supplies Expense would have been understated. In making the adjusting entry, the correct balance of Office Supplies, $100, is now reported on the balance sheet as of December 31 and the income statement is correctly reporting an expense of $400.

Depreciation

Property, plant, and equipment (also called *plant assets*) are long-lived, tangible assets used in the operation of a business. Examples include land, buildings, equipment, furniture, and automobiles. As a business uses these assets, their value and usefulness decline. The decline in usefulness of a plant asset is an expense, and accountants systematically spread the asset's cost over its useful life. The allocation of a plant asset's cost over its useful life is called **depreciation**. For example, a business might pay cash for an automobile when purchased, but the automobile will last for years, so depreciation allocates the cost spent on the car over the time the business uses the car. All plant assets are depreciated, with the exception of land. We record no depreciation for land because, unlike buildings and equipment, it does not have a definitive or clearly estimable useful life, so it is difficult to allocate the cost of land.

Property, Plant, and Equipment
Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Depreciation
The process by which businesses spread the allocation of a plant asset's cost over its useful life.

Similarity to Prepaid Expenses The concept of accounting for plant assets is similar to that of prepaid expenses. The major difference is the length of time it takes for the asset to be used up. Prepaid expenses usually expire within a year, but plant assets remain useful for several years. As a business uses its plant assets, an adjusting entry is required to allocate the assets' costs. The adjusting entry records the cost allocation to an expense account called Depreciation Expense.

Let's review an example for Smart Touch Learning. On December 2, the business received a contribution of furniture with a market value of $18,000 from Sheena Bright. In exchange, Smart Touch Learning issued shares of stock to Bright and made the following journal entry:

A↑	=	L	+	E↑
Furniture↑				Common Stock↑

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture	18,000	
	Common Stock		18,000
	Contribution of furniture in exchange for common stock.		

After posting, the Furniture account has an $18,000 balance:

Furniture	
Dec. 2 18,000	

Smart Touch Learning believes the furniture will remain useful for five years, and at the end of five years, Smart Touch Learning believes the furniture will be worthless. The expected value of a depreciable asset at the end of its useful life is called the **residual value**. Smart Touch Learning will use the straight-line method to compute the amount of depreciation. The **straight-line method** allocates an equal amount of depreciation each year and is calculated as:

Residual Value
The expected value of a depreciable asset at the end of its useful life.

Straight-Line Method
A depreciation method that allocates an equal amount of depreciation each year. (Cost – Residual value) / Useful life.

Straight-line depreciation = (Cost − Residual value) / Useful life

Smart Touch Learning will calculate the depreciation of the furniture for the month of December as:

Straight-line depreciation = (Cost − Residual value) / Useful life
= ($18,000 − $0) / 5 years
= $3,600 per year / 12 months
= $300 per month

Depreciation expense for December is recorded by the following adjusting entry:

A↓	=	L	+	E↓
Accumulated Depreciation—Furniture↑				Depreciation Expense—Furniture↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Furniture	300	
	Accumulated Depreciation—Furniture		300
	To record depreciation on furniture.		

The Accumulated Depreciation Account Notice that in the preceding adjusting entry for depreciation, we credited Accumulated Depreciation—Furniture and not the asset account Furniture. Why? **We need to keep the original cost of the furniture separate from the accumulated depreciation because of the cost principle. Managers can then refer to the Furniture account to see how much the asset originally cost.** This information may help decide how much to sell the asset for in the future or how much to pay for new furniture. The **Accumulated Depreciation** account is the sum of all depreciation expense recorded for the depreciable asset to date. Accumulated Depreciation will increase (accumulate) over time.

Accumulated Depreciation is a contra asset, which means that it is an asset account with a normal credit balance. Contra means opposite. A **contra account** has two main characteristics:

- A contra account is paired with and is listed immediately after its related account in the chart of accounts and associated financial statement.
- A contra account's normal balance (debit or credit) is the opposite of the normal balance of the related account.

For example, Accumulated Depreciation—Furniture is the contra account that follows the Furniture account on the balance sheet. The Furniture account has a normal debit balance, so Accumulated Depreciation—Furniture, a contra asset, has a normal credit balance.

A business may have a separate Accumulated Depreciation account for each depreciable asset. Because Smart Touch Learning has both a Building and a Furniture account, it also has these two accounts: Accumulated Depreciation—Building, and Accumulated Depreciation—Furniture. However, small companies often have only one Accumulated Depreciation account for all of their depreciable assets.

After posting the depreciation, the accounts appear as follows:

Furniture			Accumulated Depreciation—Furniture			Depreciation Expense—Furniture	
Dec. 2	18,000			300	Dec. 31	Dec. 31	300

The Accumulated Depreciation account accumulates the depreciation expense. This means that next month an additional $300 will be added to the Accumulated Depreciation—Furniture account creating a balance of $600, representing two months of depreciation. At the end of three months, the Accumulated Depreciation—Furniture account will have a balance of $900 ($300 per month x 3 months).

When recording depreciation, why don't we record a credit to the Furniture account?

Accumulated Depreciation
The sum of all the depreciation expense recorded to date for a depreciable asset.

Contra Account
An account that is paired with, and is listed immediately after, its related account in the chart of accounts and associated financial statement and whose normal balance is the opposite of the normal balance of the related account.

Book Value
A depreciable asset's cost minus accumulated depreciation.

Book Value The balance sheet reports both Furniture and Accumulated Depreciation—Furniture. Because it is a contra account, Accumulated Depreciation—Furniture is subtracted from Furniture. The resulting net amount (cost minus accumulated depreciation) of a plant asset is called its **book value**. The book value represents the cost invested in the asset that the business has not yet expensed. For Smart Touch Learning's furniture, the book value on December 31 is as follows:

Book value of furniture:	
Furniture	$ 18,000
Less: Accumulated Depreciation—Furniture	(300)
Book value of furniture	$ 17,700

Depreciation on the building purchased on December 1 would be recorded in a similar manner. Suppose that the monthly depreciation is $250. The following adjusting entry would record depreciation for December:

A↓	=	L	+	E↓
Accumulated Depreciation—Building↑				Depreciation Expense—Building↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Building	250	
	Accumulated Depreciation—Building		250
	To record depreciation on building.		

Remember, an increase in a contra asset, such as Accumulated Depreciation, decreases total assets. This is because a contra asset has a credit balance and credits decrease assets.

Had Smart Touch Learning not recorded the adjusting entries for depreciation on the furniture and building, plant assets would have been overstated and expenses would have been understated. After recording the adjusting entries, property, plant, and equipment (plant assets) are reported at the correct net amount, as shown on the December 31 partial balance sheet in Exhibit 3-2.

Exhibit 3-2 | Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018		
Property, Plant, and Equipment		
Land		$ 20,000
Building	$ 60,000	
Less: Accumulated Depreciation—Building	(250)	59,750
Furniture	18,000	
Less: Accumulated Depreciation—Furniture	(300)	17,700
Property, Plant, and Equipment, Net		$ 97,450

Deferred Revenues

Remember, deferred (or unearned) revenues occur when the company receives cash before it does the work or delivers a product to earn that cash. The company owes a product or a service to the customer, or it owes the customer his or her money back. Only after completing the job or delivering the product does the business *earn* the revenue. Because of this delay, unearned revenue is a liability and is also called **deferred revenue**. The revenue associated with the work or product is not recognized when the cash is received but is instead deferred until it is earned.

Deferred Revenue
A liability created when a business collects cash from customers in advance of completing a service or delivering a product.

Suppose, for example, a law firm engages Smart Touch Learning to provide e-learning services for the next 30 days, agreeing to pay $600 in advance. Smart Touch Learning collected the amount on December 21 and recorded the following entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
	Collected cash for future services.		

A↑	=	L↑	+	E
Cash↑		Unearned Revenue↑		

The liability account, Unearned Revenue, now shows that Smart Touch Learning owes $600 in services.

Unearned Revenue	
	600 Dec. 21

During the last 10 days of the month—December 22 through December 31—Smart Touch Learning will *earn* approximately one-third (10 days divided by 30 days) of the $600, or $200. Therefore, Smart Touch Learning makes the following adjusting entry to record earning $200 of revenue:

A	=	L↓	+	E↑
		Unearned Revenue↓		Service Revenue↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	200	
	Service Revenue		200
	To record service revenue earned that was collected in advance.		

This adjusting entry shifts $200 from the liability account to the revenue account. Service Revenue increases by $200, and Unearned Revenue decreases by $200. Now both accounts are up to date at December 31:

Unearned Revenue

Dec. 31	200	600	Dec. 21
		400	Bal.

Service Revenue

		5,500	Nov. 8
		3,000	Nov. 10
		8,000	Dec. 28
		200	Dec. 31
		16,700	Bal.

Had the adjusting entry not been made, the liability, Unearned Revenue, would be overstated and Service Revenue would be understated.

Accrued Expenses

Accrued Expense
An expense that the business has incurred but has not yet paid.

Businesses often incur expenses before paying for them. The term **accrued expense** refers to an expense of this type. An accrued expense hasn't been paid for yet. Consider an employee's salary. Salaries Expense grows as the employee works, so the expense is said to *accrue*. Another accrued expense is interest expense on a note payable. Interest accrues as time passes on the note. An accrued expense always creates an accrued liability.

Corporations do not make daily or weekly journal entries to accrue expenses. Instead, they wait until the end of the accounting period. They make an adjusting entry to bring each expense (and the related liability) up to date for the financial statements.

Accrued Salaries Expense

Smart Touch Learning pays its employee a monthly salary of $2,400—half on the 15th and half on the first day of the next month. On the next page is a calendar for December and the first week in January with the two pay days circled.

December 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						Dec 1
2	3	4	5	6	7	8
9	10	11	12	13	14	15 Pay Day
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	Jan 1 Pay Day	2	3	4	5

During December, the company paid the first half-month salary on Saturday, December 15, and made this entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Salaries Expense	1,200	
	Cash		1,200
	Paid salaries.		

A↓ Cash↓ = L + E↓ Salaries Expense↑

The December 15 entry records only the first half of December's salaries expense. The second payment of $1,200 will occur on January 1; however, the expense was incurred in December, so the expense must be recorded in December. On December 31, Smart Touch Learning makes the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
	To accrue salaries expense.		

A = L↑ Salaries Payable↑ + E↓ Salaries Expense↑

After posting, both Salaries Expense and Salaries Payable are up to date:

Salaries Payable

	1,200	Dec. 31
	1,200	Bal.

Salaries Expense

Nov. 15	1,200	
Dec. 1	1,200	
Dec. 15	1,200	
Dec. 31	1,200	
Bal.	4,800	

Salaries Expense shows a full two months' salary, and Salaries Payable shows the liability owed at December 31. This is an example of a liability that was understated before the adjusting entry was made. It also is an example of the matching principle: We are recording December's Salaries Expense in December so it will be reported on the same income statement as December's revenues.

Future Payment of Accrued Salaries Expense The adjusting entry at December 31 creates a liability that will eventually be paid. In this case, Smart Touch Learning will pay its employee the second half of December's wages on January 1. Because the expense has already been recorded, Smart Touch Learning will not record the expense again. To do so would record the expense twice, thus overstating the expense account. Instead, the business will decrease the amount of the liability, Salaries Payable, with a debit and record the cash payment. On January 1, Smart Touch Learning would record the following journal entry:

A↓	=	L↓	+	E
Cash↓		Salaries Payable↓		

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Salaries Payable	1,200	
	Cash		1,200
	To record payment of accrued expense.		

Don't confuse this entry with an adjusting entry. Adjusting entries are recorded only at the end of the accounting period and are used to record either revenue earned or expenses incurred. This entry is a journal entry. It is simply recording an everyday business transaction—the payment of salaries previously accrued. In this example, the amount paid for salaries was equal to the amount of the liability in the adjusting entry. Sometimes, however, the amount paid might be different than the liability in the adjusting entry. For example, assume that instead of making a payment for salaries on January 1, Smart Touch Learning doesn't make the payment until January 15 and pays a full month's salary. By delaying the payment, Smart Touch Learning incurs additional days of salaries expense. The journal entry to record the payment on January 15 will not only decrease the payable recorded in the adjusting entry but will also record any additional expense incurred.

Accrued Interest Expense

Borrowing money creates an additional liability for a Note Payable. Remember the purchase of the building on December 1, 2018? Smart Touch Learning purchased a $60,000 building in exchange for a loan. Smart Touch Learning signed a one-year loan and recorded the following entry using the Notes Payable account:

A↑	=	L↑	+	E
Building↑		Notes Payable↑		

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building	60,000	
	Notes Payable		60,000
	Purchase of building with note.		

ETHICS

When should accrued expenses be recorded?

Evan is in the process of recording the adjusting entries for Green Landscaping Services. Bob Green, owner and manager, has asked Evan to record all of the adjusting entries except for accrued expenses. Bob has a meeting with the banker on Monday to apply for a business loan. Bob knows that the banker will review his balance sheet and income statement. Bob is concerned that by recording the accrued expenses, the business's liabilities will be significantly higher on the balance sheet and a net loss will be reported on the income statement (due to higher expenses). Bob has instructed Evan to delay recording the accrued expenses until after his meeting with the banker. What should Evan do?

Solution

Failing to record the adjusting entries for accrued expenses violates the matching principle. Recording the expenses now (before Monday) accurately matches the occurrence of the expenses with the revenues that were created during that period. If Evan does not record the adjusting entries, the financial statements will not accurately represent the financial position or operating performance of the business. The banker could be tricked into lending the company money. Then, if the business could not repay the loan, the bank would lose—all because the banker relied on incorrect accounting information supplied by the company.

Interest on this note is payable one year later, on December 1, 2019. Although the company won't make the interest payment for a year, the company must record the amount of interest expense that has been incurred by December 31, 2018. The company will make an adjusting entry to record interest expense for one month (December 1–December 31).

The formula for computing the interest is as follows:

$$\text{Amount of interest} = \text{Principal} \times \text{Interest rate} \times \text{Time}$$

In the formula, time (period) represents the portion of a year that interest has accrued on the note. It may be expressed as a fraction of a year in months (number of months/12) or a fraction of a year in days (number of days/365). Smart Touch Learning's note payable has an interest rate of 2% per year and computes interest expense for the month as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time}\\ &= \$60{,}000 \times 0.02 \times 1/12\\ &= \$100\end{aligned}$$

The December 31 adjusting entry to accrue interest expense is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Interest Expense	100	
	Interest Payable		100
	To accrue interest expense.		

$$\underline{\text{A}} \;\Big\}=\Big\{\; \underline{\text{L}\uparrow} + \underline{\text{E}\downarrow}$$

Interest Payable↑ ; Interest Expense↑

Notice that the adjusting entry records a credit to the liability, Interest Payable. This is because the interest payment will not be made until next year; therefore, Smart Touch Learning owes interest to the bank. Had the adjusting entry not been recorded, liabilities and expenses would have been understated. After posting, Interest Expense and Interest Payable now have the following correct balances:

Interest Payable

	100	Dec. 31
	100	Bal.

Interest Expense

Dec. 31	100	
Bal.	100	

Accrued Revenues

Accrued Revenue
A revenue that has been earned but for which the cash has not yet been collected.

As we have just seen, expenses can occur before a company makes a cash payment for them, which creates an accrued expense. Similarly, businesses can earn revenue before they receive the cash. This creates an **accrued revenue**, which is a revenue that has been earned but for which the cash has not yet been collected.

Assume that Smart Touch Learning is hired on December 15 to perform e-learning services, beginning on December 16. Under this agreement, the business will earn $1,600 monthly and receive payment on January 15. At the date of hiring, Smart Touch Learning does not record a journal entry because revenue has not yet been earned. During December, it will earn half a month's fee, $800, for work December 16 through December 31. On December 31, Smart Touch Learning makes the following adjusting entry to record the revenue earned December 16 through December 31:

A↑	=	L	+	E↑
Accounts Receivable↑				Service Revenue↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Accounts Receivable	800	
	Service Revenue		800
	To accrue service revenue.		

The adjusting entry records the earned revenue and brings the balance of the Service Revenue account to $17,500. In addition, the adjusting entry records an additional $800 account receivable. Smart Touch Learning did not record cash because the business has not yet received payment on the services provided. The cash will not be received until January 15. Smart Touch Learning's account balances after posting the adjusting entry are:

Accounts Receivable

	Debit	Credit	
Nov. 10	3,000	2,000	Nov. 22
Dec. 31	800		
Bal.	1,800		

Service Revenue

	Debit	Credit	
		5,500	Nov. 8
		3,000	Nov. 10
		8,000	Dec. 28
		200	Dec. 31
		800	Dec. 31
		17,500	Bal.

Without the adjustment, Smart Touch Learning's financial statements would understate both an asset, Accounts Receivable, and a revenue, Service Revenue.

Future Receipt of Accrued Revenues The adjusting entry on December 31 records revenue earned for half a month and also creates an accounts receivable. When Smart Touch Learning receives the payment on January 15, the business will record the following entry:

A↑	=	L	+	E↑
Cash↑ Accounts Receivable↓				Service Revenue↑

Revenue for Jan. 1–Jan. 15

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Cash	1,600	
	Service Revenue		800
	Accounts Receivable		800
	Performed services and received cash.		

Accounts Receivable created from the adjusting entry.

Notice that on January 15, Smart Touch Learning records revenue only for the remaining half of the month (January 1–January 15). Smart Touch Learning recognizes that $800 of revenue was already recorded in December. The entry on January 15 removes the accounts receivable and records the remaining revenue. If the business had incorrectly recorded $1,600 of Service Revenue on January 15, the revenue would have been overstated in January.

Exhibit 3-3 summarizes the adjusting entries for deferrals and accruals.

Exhibit 3-3 | **Deferral and Accrual Adjustments**

ORIGINAL ENTRY / **ADJUSTING ENTRY**

DEFERRALS—Cash receipt or Cash payment occurs first.

Prepaid Expenses

Original entry:

Prepaid Rent	XXX	
Cash		XXX
Pay for rent in advance and record an asset first.		

Adjusting entry:

Rent Expense	XXX	
Prepaid Rent		XXX
Adjust for rent used later.		

Depreciation

Original entry:

Furniture	XXX	
Cash		XXX
Pay for furniture in advance and record an asset first.		

Adjusting entry:

Depreciation Expense—Furniture	XXX	
Accumulated Depreciation—Furniture		XXX
Adjust for depreciation (use) of asset later.		

Unearned Revenues

Original entry:

Cash	XXX	
Unearned Revenue		XXX
Receive cash in advance and record a liability first.		

Adjusting entry:

Unearned Revenue	XXX	
Service Revenue		XXX
Adjust for revenue earned later.		

ACCRUALS—Cash receipt or Cash payment occurs later.

Accrued Expenses

Salaries Expense	XXX	
Salaries Payable		XXX
Accrual for expense incurred first.		

Accrued Revenues

Accounts Receivable	XXX	
Service Revenue		XXX
Accrual for revenue earned first.		

Two rules to remember about adjusting entries:

1. *Adjusting entries never involve the Cash account.*
2. *Adjusting entries either*
   a. *Increase a revenue account (credit revenue) or*
   b. *Increase an expense account (debit expense).*

The adjusting entries and account balances after posting for Smart Touch Learning at December 31 are shown in Exhibit 3-4.

- Panel A gives the data for each adjustment.
- Panel B shows the adjusting entries.
- Panel C shows the T-accounts and balances after posting.

Exhibit 3-4 | **Journalizing and Posting the Adjusting Entries of Smart Touch Learning**

Panel A: Information for Adjustments

a. Prepaid rent expired, $1,000.
b. Supplies used, $400.
c. Depreciation on furniture, $300.
d. Depreciation on building, $250.
e. Service revenue that was collected in advance and now has been earned, $200.
f. Accrued salaries expense, $1,200.
g. Accrued interest on note, $100.
h. Accrued service revenue, $800.

Panel B: Adjusting Entries

Date		Accounts and Explanation	Debit	Credit
(a)	Dec. 31	Rent Expense	1,000	
		Prepaid Rent		1,000
		To record rent expense.		
(b)	31	Supplies Expense	400	
		Office Supplies		400
		To record office supplies used.		
(c)	31	Depreciation Expense—Furniture	300	
		Accumulated Depreciation—Furniture		300
		To record depreciation on furniture.		
(d)	31	Depreciation Expense—Building	250	
		Accumulated Depreciation—Building		250
		To record depreciation on building.		
(e)	31	Unearned Revenue	200	
		Service Revenue		200
		To record service revenue earned that was collected in advance.		
(f)	31	Salaries Expense	1,200	
		Salaries Payable		1,200
		To accrue salaries expense.		
(g)	31	Interest Expense	100	
		Interest Payable		100
		To accrue interest expense.		
(h)	31	Accounts Receivable	800	
		Service Revenue		800
		To accrue service revenue.		

Panel C: Account Balances After Posting

ASSETS = LIABILITIES + EQUITY

EQUITY = Contributed Capital + Retained Earnings

Cash = Accounts Payable + Common Stock − Dividends + Service Revenue − Expenses

ASSETS

Cash

Nov. 1	30,000	20,000	Nov. 2
Nov. 8	5,500	3,200	Nov. 15
Nov. 22	2,000	300	Nov. 21
Dec. 21	600	5,000	Nov. 25
Dec. 28	8,000	3,000	Dec. 1
		1,200	Dec. 1
		1,200	Dec. 15
Bal.	12,200		

Accounts Receivable

Nov. 10	3,000	2,000	Nov. 22
Dec. 31	800		
Bal.	1,800		

Office Supplies

Nov. 3	500	400	Dec. 31
Bal.	100		

Prepaid Rent

Dec. 1	3,000	1,000	Dec. 31
Bal.	2,000		

Land

Nov. 2	20,000		
Bal.	20,000		

Building

Dec. 1	60,000		
Bal.	60,000		

Accumulated Depreciation—Building

		250	Dec. 31
		250	Bal.

Furniture

Dec. 2	18,000		
Bal.	18,000		

Accumulated Depreciation—Furniture

		300	Dec. 31
		300	Bal.

LIABILITIES

Accounts Payable

Nov. 21	300	500	Nov. 3
		200	Bal.

Utilities Payable

		100	Dec. 15
		100	Bal.

Salaries Payable

		1,200	Dec. 31
		1,200	Bal.

Interest Payable

		100	Dec. 31
		100	Bal.

Unearned Revenue

Dec. 31	200	600	Dec. 21
		400	Bal.

Notes Payable

		60,000	Dec. 1
		60,000	Bal.

EQUITY

Contributed Capital

Common Stock

		30,000	Nov. 1
		18,000	Dec. 2
		48,000	Bal.

Retained Earnings

Dividends

Nov. 25	5,000		
Bal.	5,000		

Service Revenue

		5,500	Nov. 8
		3,000	Nov. 10
		8,000	Dec. 28
		200	Dec. 31
		800	Dec. 31
		17,500	Bal.

Rent Expense

Nov. 15	2,000		
Dec. 31	1,000		
Bal.	3,000		

Salaries Expense

Nov. 15	1,200		
Dec. 1	1,200		
Dec. 15	1,200		
Dec. 31	1,200		
Bal.	4,800		

Supplies Expense

Dec. 31	400		
Bal.	400		

Utilities Expense

Dec. 15	100		
Bal.	100		

Depreciation Expense—Building

Dec. 31	250		
Bal.	250		

Depreciation Expense—Furniture

Dec. 31	300		
Bal.	300		

Interest Expense

Dec. 31	100		
Bal.	100		

$113,550 = $62,000 + $51,550

Try It!

Startech Surveillance Services had the following adjustments as of the end of the year:

- **a.** Equipment depreciation was $1,500.
- **b.** $700 of advertising expense was incurred but not paid. (Use Advertising Payable.)
- **c.** Office Supplies on hand at the end of the year totaled $250. The beginning balance of Office Supplies was $600.
- **d.** $1,200 of rent revenue was earned but not recorded or received.
- **e.** Unearned revenue of $3,000 had been earned.

6. For each situation, indicate which category of adjustment (deferral or accrual) is described.
7. Journalize the adjusting entry needed.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S3-5 through S3-12. MyAccountingLab

WHAT IS THE PURPOSE OF THE ADJUSTED TRIAL BALANCE, AND HOW DO WE PREPARE IT?

Learning Objective 4
Explain the purpose of and prepare an adjusted trial balance

Adjusted Trial Balance
A list of all the accounts with their adjusted balances.

This chapter began with the *unadjusted* trial balance. After the adjustments have been journalized and posted, the account balances are updated and an **adjusted trial balance** can be prepared by listing all the accounts with their adjusted balances. Remember, the purpose of a trial balance is to ensure that total debits equal total credits. Even if the trial balance balances, it does not guarantee that a mistake has not been made. For example, an adjusting entry could have been recorded for the incorrect amount or could have been omitted entirely. The equality of the trial balance ensures only that each posted transaction had an equal debit and credit amount.

The adjusted trial balance for Smart Touch Learning is shown in Exhibit 3-5.

Exhibit 3-5 | **Adjusted Trial Balance**

SMART TOUCH LEARNING Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		$ 250
Furniture	18,000	
Accumulated Depreciation—Furniture		300
Accounts Payable		200
Utilities Payable		100
Salaries Payable		1,200
Interest Payable		100
Unearned Revenue		400
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		17,500
Rent Expense	3,000	
Salaries Expense	4,800	
Supplies Expense	400	
Utilities Expense	100	
Depreciation Expense—Building	250	
Depreciation Expense—Furniture	300	
Interest Expense	100	
Total	$ 128,050	$ 128,050

Try It!

8. Hooten Carpentry had the following accounts and account balances after adjusting entries. Assume all accounts have normal balances. Prepare the adjusted trial balance for Hooten Carpentry as of December 31, 2018.

Cash	$ 4,025	Common Stock	$?
Land	5,000	Accounts Receivable	660
Utilities Expense	400	Office Supplies	120
Accounts Payable	225	Utilities Payable	210
Accumulated Depreciation—Equipment	1,000	Service Revenue	12,000
Salaries Expense	550	Unearned Revenue	300
Supplies Expense	80	Depreciation Expense—Equipment	800
Equipment	10,000	Dividends	500

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S3-13. MyAccountingLab

WHAT IS THE IMPACT OF ADJUSTING ENTRIES ON THE FINANCIAL STATEMENTS?

Learning Objective 5
Identify the impact of adjusting entries on the financial statements

The adjusted trial balance is used to prepare the financial statements. If adjusting entries are not recorded, the ledger accounts will not reflect the correct balances and the adjusted trial balance will be incorrect. Remember, adjusting entries are completed to ensure that all revenues and expenses for the accounting period examined have been recorded. In addition, adjusting entries update the balance sheet accounts so that all accounts are properly valued. Exhibit 3-6 summarizes the impact on the financial statements had the adjusting entries not been recorded.

Exhibit 3-6 | Impact of Adjusting Entries on Financial Statements

Type of Adjusting Entry	Description	Adjusting Entry	Impact on Financial Statements if Adjusting Entries Are Not Made
Deferred Expenses	Advance cash payments of future expenses.	Expense DR Asset* CR	Income Statement: expenses understated net income overstated Balance Sheet: assets overstated equity overstated
Deferred Revenues	Advance cash receipts of future revenues.	Liability DR Revenue CR	Income Statement: revenues understated net income understated Balance Sheet: liabilities overstated equity understated
Accrued Expenses	An expense that has been incurred but not paid.	Expense DR Liability CR	Income Statement: expenses understated net income overstated Balance Sheet: liabilities understated equity overstated
Accrued Revenues	A revenue that has been earned but cash has not yet been collected.	Asset DR Revenue CR	Income Statement: revenues understated net income understated Balance Sheet: assets understated equity understated

*If recording depreciation: the contra asset, Accumulated Depreciation, is credited.

Remember: Net income increases Retained Earnings, an equity account. Therefore, if net income is overstated, then equity will also be overstated. And if net income is understated, then equity will also be understated.

TYING IT ALL TOGETHER

iHeartMedia, Inc. is a company that has three distinct business segments: iHeartMedia (media and entertainment company), Americas Outdoor Advertising, and International Outdoor Advertising. iHeartMedia, Inc. currently operates more than 840 radio stations and reaches more than 110 million listeners every week. It operates both traditional radio broadcasting and online and mobile radio stations. In addition, the company also produces nationally recognized events for their listeners such as the iHeartRadio Music Festival. The primary source of revenue for iHeartMedia, Inc. is the sale of commercials on its radio stations.

Suppose on March 1, iHeartMedia, Inc. signs an advertising contract with a local restaurant, Margaritas, to provide 12 months of commercials for $9,000. How would iHeartMedia report the advanced payment from Margaritas?

The receipt of cash from Margaritas would represent unearned revenue because iHeartMedia has not satisfied the performance obligation to provide the commercials. iHeartMedia would record a journal entry as follows:

	Cash	9,000	
	Unearned Revenue		9,000

On December 31, would iHeartMedia, Inc. need to record an adjusting entry related to the advertising contract? If so, what would the adjusting entry be?

At the end of the year, iHeartMedia has provided 10 months (March through December) of advertising or $7,500 ($9,000 / 12 months = $750 per month × 10 months = $7,500) for Margaritas. iHeartMedia would need to record an adjusting entry showing that the Unearned Revenue has now been earned as follows:

	Unearned Revenue	7,500	
	Advertising Revenue		7,500

Suppose iHeartMedia, Inc. fails to record the adjusting entry related to the advertising contract, what would be the impact on the financial statements? Why is it important for companies to record adjusting entries?

Had iHeartMedia, Inc. failed to record the adjusting entry, its financial statements would be incorrect. The liability account, Unearned Revenue, would be overstated and Advertising Revenue would be understated. This would cause net income to be understated on the income statement. It is important for companies to record adjusting entries so that the correct balances of accounts are reported to users of the financial statements and an accurate picture of the company's financial health is represented.

Try It!

9. Identify the impact on the income statement and balance sheet if adjusting entries for the following situations were not recorded.

a. Office Supplies used, $800.
b. Accrued service revenue, $4,000.
c. Depreciation on building, $3,500.
d. Prepaid Insurance expired, $650.
e. Accrued salaries expense, $2,750.
f. Service revenue that was collected in advance has now been earned, $130.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S3-14. MyAccountingLab

HOW COULD A WORKSHEET HELP IN PREPARING ADJUSTING ENTRIES AND THE ADJUSTED TRIAL BALANCE?

Learning Objective 6
Explain the purpose of a worksheet and use it to prepare adjusting entries and the adjusted trial balance

A useful step in preparing adjusting entries and the adjusted trial balance is to create a worksheet. A **worksheet** is an internal document that helps summarize data for the preparation of the financial statements. The worksheet is not a journal, a ledger, or a financial statement. It is merely a summary device that helps identify the accounts that need adjustments. Most worksheets are completed using Microsoft Excel.

Worksheet
An internal document that helps summarize data for the preparation of financial statements.

Exhibit 3-7 shows the partially completed worksheet for Smart Touch Learning.

Exhibit 3-7 | **Partially Completed Worksheet**

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	SMART TOUCH LEARNING												
2	Worksheet												
3	December 31, 2018												
4													
5	Account Names	Unadjusted Trial Balance			Adjustments			Adjusted Trial Balance		Income Statement		Balance Sheet	
6		Debit	Credit		Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	$ 12,200						$ 12,200					
8	Accounts Receivable	1,000		(h)	$ 800			1,800					
9	Office Supplies	500				$ 400	(b)	100					
10	Prepaid Rent	3,000				1,000	(a)	2,000					
11	Land	20,000						20,000					
12	Building	60,000						60,000					
13	Accumulated Depreciation—Building					250	(d)		$ 250				
14	Furniture	18,000						18,000					
15	Accumulated Depreciation—Furniture					300	(c)		300				
16	Accounts Payable		$ 200						200				
17	Utilities Payable		100						100				
18	Salaries Payable					1,200	(f)		1,200				
19	Interest Payable					100	(g)		100				
20	Unearned Revenue		600	(e)	200				400				
21	Notes Payable		60,000						60,000				
22	Common Stock		48,000						48,000				
23	Dividends	5,000						5,000					
24	Service Revenue		16,500			1,000	(e,h)		17,500				
25	Rent Expense	2,000		(a)	1,000			3,000					
26	Salaries Expense	3,600		(f)	1,200			4,800					
27	Supplies Expense			(b)	400			400					
28	Utilities Expense	100						100					
29	Depreciation Expense—Building			(d)	250			250					
30	Depreciation Expense—Furniture			(c)	300			300					
31	Interest Expense			(g)	100			100					
32	**Total**	**$ 125,400**	**$ 125,400**		**$ 4,250**	**$ 4,250**		**$ 128,050**	**$ 128,050**				
33													

In this chapter, we complete a part of the worksheet. For now, we will concern ourselves with the first four sections.

Section 1: Account names. The account names are taken from and listed in the same order as the chart of accounts. (Cash first, Accounts Receivable second, and so on.)

Section 2: Unadjusted trial balance. The account balances are copied directly from the ledger before any adjustments. Total debits must equal total credits.

Section 3: Adjustments. Enter the adjusting journal entries that were made on December 31.

Section 4: Adjusted trial balance. Gives the account balances after adjustments. Each amount in these columns is computed by combining the unadjusted trial balance amounts plus or minus the adjustments. For example, Accounts Receivable starts with a debit balance of $1,000. Adding the $800 debit from the adjustment gives Accounts Receivable an adjusted balance of $1,800. Service Revenue starts with a $16,500 credit balance. Adding the $1,000 credit from the adjustments gives Service Revenue an adjusted balance of $17,500. As with the unadjusted trial balance, total debits must equal total credits.

The income statement and balance sheet sections of the worksheet remain to be completed. These will be covered in the next chapter.

Try It!

10. The partial worksheet for Sam's Delivery Service follows. Complete the adjusted trial balance columns.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**SAM'S DELIVERY SERVICE**												
2	**Worksheet**												
3	**December 31, 2018**												
4													
5	**Account Names**	**Unadjusted Trial Balance**			**Adjustments**			**Adjusted Trial Balance**		**Income Statement**		**Balance Sheet**	
6		**Debit**	**Credit**		**Debit**	**Credit**		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 6,500											
8	Accounts Receivable	800		(g)	$ 225								
9	Office Supplies	250				$ 80	(b)						
10	Prepaid Rent	1,000				800	(a)						
11	Delivery Van	23,000											
12	Accumulated Depreciation—Delivery Van					750	(c)						
13	Equipment	15,000											
14	Accumulated Depreciation—Equipment					300	(d)						
15	Accounts Payable		$ 800										
16	Utilities Payable		230										
17	Salaries Payable					875	(f)						
18	Unearned Revenue		400	(e)	130								
19	Common Stock		37,800										
20	Dividends	8,000											
21	Delivery Revenue		23,000			355	(e,g)						
22	Rent Expense	3,000		(a)	800								
23	Salaries Expense	4,500		(f)	875								
24	Supplies Expense			(b)	80								
25	Utilities Expense	180											
26	Depreciation Expense—Delivery Van			(c)	750								
27	Depreciation Expense—Equipment			(d)	300								
28	**Total**	**$ 62,230**	**$ 62,230**		**$ 3,160**	**$ 3,160**							
29													

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S3-15. MyAccountingLab

APPENDIX 3A: Alternative Treatment of Recording Deferred Expenses and Deferred Revenues

Chapters 1–3 illustrate the most popular way to account for deferred expenses and deferred revenues. This appendix illustrates an alternative approach.

WHAT IS AN ALTERNATIVE TREATMENT OF RECORDING DEFERRED EXPENSES AND DEFERRED REVENUES?

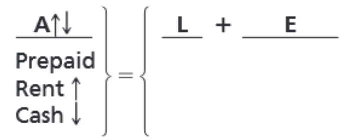
Deferred Expenses

Learning Objective 7
Understand the alternative treatment of recording deferred expenses and deferred revenues

Recall that deferred expenses, also called prepaid expenses, are advance payments of future expenses such as insurance, rent, and advertising. Office supplies are also accounted for as deferred expenses.

When a business prepays an expense—rent, for example—it can debit an *asset* account (Prepaid Rent) and defer the recognition of the expense. For example, Smart Touch Learning prepaid three months of office rent totaling $3,000 on December 1, 2018. The journal entry can be recorded as:

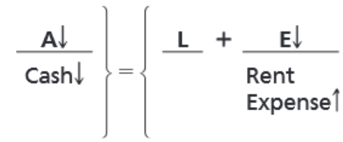
Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
	Paid rent in advance.		



Deferred Expense Recorded Initially as an Expense

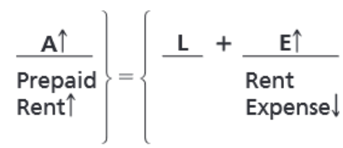
Deferring an expense creates an asset. However, the asset may be so short lived that it will expire in the current accounting period—within one year or less. Thus, the accountant may decide to debit the prepayment to an expense account at the time of payment. The entry could, alternatively, be recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Rent Expense	3,000	
	Cash		3,000
	Paid rent in advance.		



As of December 31, 2018, only one month's prepayment has expired, leaving two months of rent still prepaid. In this case, the accountant must transfer two-thirds of the original prepayment of $3,000, or $2,000, to the asset account Prepaid Rent. At December 31, 2018, the business still has the benefit of prepayment for January 1 through February 28, 2019. The adjusting entry at December 31 is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Prepaid Rent	2,000	
	Rent Expense		2,000
	To record prepaid rent.		



After posting, the two accounts appear as follows:

Prepaid Rent

Dec. 31	2,000	
Bal.	2,000	

Rent Expense

Dec. 1	3,000	2,000	Dec. 31
Bal.	1,000		

At December 31, the $3,000 prepayment is correctly divided as $2,000 of Prepaid Rent and $1,000 of Rent Expense, regardless of whether the business initially debits the prepayment to an asset or to an expense account.

Deferred Revenues

Deferred revenues, also called unearned revenues, arise when a business collects cash before earning the revenue. Deferred revenues are liabilities because the business that receives the cash owes the customer goods or services to be delivered later.

When a business receives cash in advance of providing services, a *liability* can be created. As an example, a law firm engages Smart Touch Learning to provide monthly e-learning services, agreeing to pay $600 in advance. Smart Touch Learning received the $600 on December 21 for services to be provided in the next 30 days. Smart Touch Learning records the following entry, recognizing the liability and deferring the recognition of the revenue.

A↑		L↑	+	E
Cash↑	=	Unearned Revenue↑		

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
	Collected cash for future services.		

Deferred Revenues Recorded Initially as a Revenue

Another way to account for the receipt of cash is to credit a *revenue* account when the business receives cash.

A↑		L	+	E↑
Cash↑	=			Service Revenue↑

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Service Revenue		600
	Collected cash for future services.		

If the business then earns all the revenue within the same accounting period, no adjusting entry is needed at the end. However, if the business earns only part of the revenue in that period, it must make an adjusting entry. In our example, Smart Touch Learning has earned only one-third of the $600, or $200, by December 31, 2018. Accordingly, Smart Touch Learning must make an adjusting entry to transfer the unearned portion (2/3 of $600, or $400) from the revenue account to a liability, as follows:

A		L↑	+	E↓
	=	Unearned Revenue↑		Service Revenue↓

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	400	
	Unearned Revenue		400
	To record unearned revenue.		

The adjusting entry transfers the unearned portion of service revenue to the liability account because Smart Touch Learning still owes e-learning services next year. After posting, the total amount, $600, is properly divided between the liability account—$400, and the revenue account—$200, as follows:

Unearned Revenue

Debit	Credit	
	400	Dec. 31
	400	Bal.

Service Revenue

	Debit	Credit	
Dec. 31	400	600	Dec. 21
		200	Bal.

At December 31, the $600 cash receipt is correctly divided: $400 of Unearned Revenue and $200 of Service Revenue, regardless of whether the business initially credits the cash receipt to a liability or to a revenue account.

Try It!

11A. Iron Horse Printing Services purchased $1,000 of printing supplies for cash, recording the transaction using the alternative treatment for deferred expenses. At the end of the year, Iron Horse had $300 of printing supplies remaining. Record the journal entry for the purchase of printing supplies and the adjusting entry for printing supplies not used.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S3A-16 and S3A-17. MyAccountingLab

REVIEW

> Things You Should Know

1. What is the difference between cash basis accounting and accrual basis accounting?

- Cash basis accounting: Revenue is recorded only when cash is received, and expenses are recorded only when cash is paid.
  - Not GAAP
  - Often used by small businesses
- Accrual basis accounting: Revenue is recorded when earned, and expenses are recorded when incurred.

2. What concepts and principles apply to accrual basis accounting?

- The time period concept assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.
- The revenue recognition principle requires companies to record revenue when it has satisfied each performance obligation.
- The matching principle guides accounting for expenses and ensures that all expenses are recorded when they are incurred during the period. It then matches those expenses against the revenues of the period.

3. What are adjusting entries, and how do we record them?

- Adjusting entries are completed at the end of the accounting period and record revenues to the period in which they are earned and expenses to the period in which they occur.
- Adjusting entries also update the asset and liability accounts.

- Four types of adjusting entries:
  - Deferred expenses (or prepaid expenses): advance payment of future expenses adjusted for amount used

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Asset		XXX

  - Deferred revenues (or unearned revenues): advance receipts of future revenues adjusted for amount earned

Date	Accounts and Explanation	Debit	Credit
	Liability	XXX	
	Revenue		XXX

  - Accrued expenses: expenses that have been incurred but not paid

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Liability		XXX

  - Accrued revenues: revenues that have been earned but not collected

Date	Accounts and Explanation	Debit	Credit
	Asset	XXX	
	Revenue		XXX

4. What is the purpose of the adjusted trial balance, and how do we prepare it?

- An adjusted trial balance is a list of all the accounts with their adjusted balances.
- It ensures that total debits equal total credits.

5. What is the impact of adjusting entries on the financial statements?

- If adjusting entries are not recorded, the balance sheet and income statement accounts will either be overstated or understated.
- Overstating or understating accounts causes the financial statements to be incorrect.

6. How could a worksheet help in preparing adjusting entries and the adjusted trial balance?

- A worksheet is an internal document that helps identify the accounts that need adjustments.
- In addition, a worksheet helps summarize data for the preparation of the financial statements.

7. What is an alternative treatment of recording deferred expenses and deferred revenues? (Appendix 3A)

- Deferred expenses can be recorded to an expense account at the time of payment. The adjusting entry would transfer any remaining prepayment to the asset account, Prepaid Expenses.
- Deferred revenues can be recorded to a revenue account at the time of cash receipt. The adjusting entry would transfer any remaining liability to the liability account, Unearned Revenue.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The unadjusted trial balance as of December 31, 2018, the end of the annual accounting period for Super Employment Services, follows:

SUPER EMPLOYMENT SERVICES
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 6,000	
Accounts Receivable	5,000	
Office Supplies	1,000	
Land	10,000	
Building	40,000	
Accumulated Depreciation—Building		$ 30,000
Furniture	10,000	
Accumulated Depreciation—Furniture		4,000
Accounts Payable		2,000
Salaries Payable		
Unearned Revenue		8,000
Common Stock		12,000
Dividends	25,000	
Service Revenue		60,000
Salaries Expense	16,000	
Supplies Expense		
Depreciation Expense—Building		
Depreciation Expense—Furniture		
Advertising Expense	3,000	
Total	$ 116,000	$ 116,000

Data needed for the adjusting entries include the following:

a. Office Supplies on hand at year-end, $200.

b. Depreciation on furniture, $2,000.

c. Depreciation on building, $1,000.

d. Salaries owed but not yet paid, $500.

e. Accrued service revenue, $1,300.

f. $3,000 of the unearned revenue has been earned.

Requirements

1. Open the ledger accounts in T-account form with their unadjusted balances as shown on the unadjusted trial balance. (See Learning Objective 3)
2. Journalize Super's adjusting entries at December 31, 2018. Use the letter (*a*, *b*, and so on) as the date. (See Learning Objective 3)
3. Post the adjusting entries to T-accounts. Determine the ending balances in the T-accounts on December 31, 2018. (See Learning Objective 3)
4. Prepare an adjusted trial balance. (See Learning Objective 4)
5. Prepare a partial worksheet including the account names, unadjusted trial balance, adjustments, and adjusted trial balance. (See Learning Objecive 6)

> Solution

Requirement 1 See next page

Requirement 2

Date	Accounts and Explanations	Debit	Credit
2018			
(a) Dec. 31	Supplies Expense ($1,000 – $200)	800	
	Office Supplies		800
	To record office supplies used.		
(b) 31	Depreciation Expense—Furniture	2,000	
	Accumulated Depreciation—Furniture		2,000
	To record depreciation expense on furniture.		
(c) 31	Depreciation Expense—Building	1,000	
	Accumulated Depreciation—Building		1,000
	To record depreciation expense on building.		
(d) 31	Salaries Expense	500	
	Salaries Payable		500
	To accrue salaries expense.		
(e) 31	Accounts Receivable	1,300	
	Service Revenue		1,300
	To accrue service revenue.		
(f) 31	Unearned Revenue	3,000	
	Service Revenue		3,000
	To record service revenue earned that was collected in advance.		

Requirements 1 and 3

ASSETS

Cash

Debit	Credit
Bal. 6,000	

Accounts Receivable

Debit	Credit
Bal. 5,000	
(e) 1,300	
Bal. 6,300	

Office Supplies

Debit	Credit
Bal. 1,000	800 (a)
Bal. 200	

Land

Debit	Credit
Bal. 10,000	

Building

Debit	Credit
Bal. 40,000	

Accumulated Depreciation—Building

Debit	Credit
	30,000 Bal.
	1,000 (c)
	31,000 Bal.

Furniture

Debit	Credit
Bal. 10,000	

Accumulated Depreciation—Furniture

Debit	Credit
	4,000 Bal.
	2,000 (b)
	6,000 Bal.

LIABILITIES

Accounts Payable

Debit	Credit
	2,000 Bal.

Salaries Payable

Debit	Credit
	500 (d)
	500 Bal.

Unearned Revenue

Debit	Credit
(f) 3,000	8,000 Bal.
	5,000 Bal.

EQUITY

Common Stock

Debit	Credit
	12,000 Bal.

Dividends

Debit	Credit
Bal. 25,000	

Service Revenue

Debit	Credit
	60,000 Bal.
	1,300 (e)
	3,000 (f)
	64,300 Bal.

Salaries Expense

Debit	Credit
Bal. 16,000	
(d) 500	
Bal. 16,500	

Supplies Expense

Debit	Credit
(a) 800	
Bal. 800	

Depreciation Expense—Building

Debit	Credit
(c) 1,000	
Bal. 1,000	

Depreciation Expense—Furniture

Debit	Credit
(b) 2,000	
Bal. 2,000	

Advertising Expense

Debit	Credit
Bal. 3,000	

Requirement 4

SUPER EMPLOYMENT SERVICES
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	Debit	Credit
Cash	$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	40,000	
Accumulated Depreciation—Building		$ 31,000
Furniture	10,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Common Stock		12,000
Dividends	25,000	
Service Revenue		64,300
Salaries Expense	16,500	
Supplies Expense	800	
Depreciation Expense—Building	1,000	
Depreciation Expense—Furniture	2,000	
Advertising Expense	3,000	
Total	$ 120,800	$ 120,800

CHAPTER 3

Requirement 5

	A	B	C	D	E	F	G
1	SUPER EMPLOYMENT SERVICES						
2	Worksheet						
3	December 31, 2018						
4							
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
6		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	$ 6,000				$ 6,000	
8	Accounts Receivable	5,000		(e) $ 1,300		6,300	
9	Office Supplies	1,000			(a) $ 800	200	
10	Land	10,000				10,000	
11	Building	40,000				40,000	
12	Accumulated Depreciation—Building		$ 30,000		(c) 1,000		$ 31,000
13	Furniture	10,000				10,000	
14	Accumulated Depreciation—Furniture		4,000		(b) 2,000		6,000
15	Accounts Payable		2,000				2,000
16	Salaries Payable				(d) 500		500
17	Unearned Revenue		8,000	(f) 3,000			5,000
18	Common Stock		12,000				12,000
19	Dividends	25,000				25,000	
20	Service Revenue		60,000		(e) 1,300		
21					(f) 3,000		64,300
22	Salaries Expense	16,000		(d) 500		16,500	
23	Supplies Expense			(a) 800		800	
24	Depreciation Expense—Building			(c) 1,000		1,000	
25	Depreciation Expense—Furniture			(b) 2,000		2,000	
26	Advertising Expense	3,000				3,000	
27	**Total**	**$ 116,000**	**$ 116,000**	**$ 8,600**	**$ 8,600**	**$ 120,800**	**$ 120,800**
28							

> Key Terms

Accrual Basis Accounting (p. 120)
Accrued Expense (p. 132)
Accrued Revenue (p. 136)
Accumulated Depreciation (p. 129)
Adjusted Trial Balance (p. 140)
Adjusting Entry (p. 125)
Book Value (p. 130)
Cash Basis Accounting (p. 120)
Contra Account (p. 129)
Deferred Expense (p. 125)
Deferred Revenue (p. 131)
Depreciation (p. 127)
Fiscal Year (p. 122)
Matching Principle (p. 123)
Property, Plant, and Equipment (p. 127)
Residual Value (p. 128)
Revenue Recognition Principle (p. 122)
Straight-Line Method (p. 128)
Time Period Concept (p. 122)
Worksheet (p. 144)

> Quick Check

Learning Objective 1

1. Which of the following is true of accrual basis accounting and cash basis accounting?

a. Accrual accounting records revenue only when it is earned.
b. Accrual accounting is not allowed under GAAP.
c. Cash basis accounting records all transactions.
d. All of the above are true.

2. Get Fit Now gains a client who prepays $540 for a package of six physical training sessions. Get Fit Now collects the $540 in advance and will provide the training later. After four training sessions, what should Get Fit Now report on its income statement assuming it uses the accrual basis accounting method?

Learning Objective 1

a. Service revenue of $360
b. Service revenue of $540
c. Unearned service revenue of $360
d. Cash of $180

3. The revenue recognition principle requires

Learning Objective 2

a. time to be divided into annual periods to measure revenue properly.
b. revenue to be recorded only after the business has satisfied its performance obligation.
c. expenses to be matched with revenue of the period.
d. revenue to be recorded only after the cash is received.

4. Adjusting the accounts is the process of

Learning Objective 3

a. subtracting expenses from revenues to measure net income.
b. recording transactions as they occur during the period.
c. updating the accounts at the end of the period.
d. zeroing out account balances to prepare for the next period.

5. Which of the following is an example of a deferral (or prepaid) adjusting entry?

Learning Objective 3

a. Recording the usage of office supplies during the period.
b. Recording salaries expense for employees not yet paid.
c. Recording revenue that has been earned but not yet received.
d. Recording interest expense incurred on a notes payable not due until next year.

6. Assume that the weekly payroll of In the Woods Camping Supplies is $300. December 31, end of the year, falls on Tuesday, and In the Woods will pay its employee on Friday for the full week. What adjusting entry will In the Woods make on Tuesday, December 31? (Use five days as a full workweek.)

Learning Objective 3

Date	Accounts and Explanation	Debit	Credit
a.	Salaries Expense	120	
	Salaries Payable		120
b.	Salaries Payable	300	
	Salaries Expense		300
c.	Salaries Expense	120	
	Cash		120
d.	*No adjustment is needed because the company will pay the payroll on Friday.*		

7. The adjusted trial balance shows

Learning Objective 4

a. amounts that may be out of balance.
b. account balances after adjustments.
c. assets and liabilities only.
d. revenues and expenses only.

CHAPTER 3

CHAPTER 3

Learning Objective 5

8. A & D Window Cleaning performed $450 of services but has not yet billed customers for the month. If A & D fails to record the adjusting entry, what is the impact on the financial statements?
   - **a.** balance sheet: assets understated; equity overstated
     income statement: expense understated
   - **b.** balance sheet: liabilities overstated; equity understated
     income statement: revenues understated
   - **c.** balance sheet: assets overstated, equity understated
     income statement: expenses understated
   - **d.** balance sheet: assets understated, equity understated
     income statement: revenues understated

Learning Objective 6

9. A worksheet
   - **a.** is a journal used to record transactions.
   - **b.** is a financial statement that reports net income during the period.
   - **c.** is an internal document that helps summarize data for the preparation of financial statements.
   - **d.** is a ledger listing the account balances and changes in those accounts.

Learning Objective 7
Appendix 3A

10A. On February 1, Clovis Wilson Law Firm contracted to provide $3,000 of legal services for the next three months and received $3,000 cash from the client. Assuming Wilson records deferred revenues using the alternative treatment, what would be the adjusting entry recorded on February 28?

Date	Accounts and Explanation	Debit	Credit
a.	Cash	3,000	
	Unearned Revenue		3,000
b.	Service Revenue	2,000	
	Unearned Revenue		2,000
c.	Unearned Revenue	1,000	
	Service Revenue		1,000
d.	Cash	3,000	
	Service Revenue		3,000

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is the difference between cash basis accounting and accrual basis accounting?
2. Which method of accounting (cash or accrual basis) is consistent with Generally Accepted Accounting Principles?
3. Which accounting concept or principle requires companies to divide their activities into small time segments such as months, quarters, or years?
4. What is a fiscal year? Why might companies choose to use a fiscal year that is not a calendar year?

5. Under the revenue recognition principle, when is revenue recorded?
6. Under the matching principle, when are expenses recorded?
7. When are adjusting entries completed, and what is their purpose?
8. What are the two basic categories of adjusting entries? Provide two examples of each.
9. What is a deferred expense? Provide an example.
10. What is the process of allocating the cost of a plant asset over its useful life called?
11. What is a contra account?
12. In the recording of depreciation expense, which account is credited?
13. What does accumulated depreciation represent?
14. How is book value calculated, and what does it represent?
15. What is a deferred revenue? Provide an example.
16. What is an accrued expense? Provide an example.
17. What is an accrued revenue? Provide an example.
18. What are the two rules to remember about adjusting entries?
19. When is an adjusted trial balance prepared, and what is its purpose?
20. If an accrued expense is not recorded at the end of the year, what is the impact on the financial statements?
21. What is a worksheet, and how is it used to help prepare an adjusted trial balance?

22A. If a payment of a deferred expense was recorded under the alternative treatment, what account would be debited at the time of payment?

23A. If a payment of a deferred expense was recorded under the alternative treatment, what account would be debited in the adjusting entry?

> Short Exercises

S3-1 Comparing cash and accrual basis accounting for expenses

Learning Objective 1

The Pink Peonies Law Firm prepays for advertising in the local newspaper. On January 1, the law firm paid $3,000 for 10 months of advertising.

How much advertising expense should Pink Peonies Law Firm record for the two months ending February 28 under the

a. cash basis? **b.** accrual basis?

S3-2 Comparing cash and accrual basis accounting for revenues

Learning Objective 1

Protection Home provides house-sitting for people while they are away on vacation. Some of its customers pay immediately after the job is finished. Some customers ask that the business send them a bill. As of the end of the year, Protection Home has collected $900 from cash-paying customers. Protection Home's remaining customers owe the business $1,300.

How much service revenue would Protection Home have for the year under the

a. cash basis? **b.** accrual basis?

Learning Objective 2

S3-3 Applying the revenue recognition principle

Seacoast Magazine sells subscriptions for $36 for 18 issues. The company collects cash in advance and then mails out the magazines to subscribers each month.

Apply the revenue recognition principle to determine

a. when *Seacoast Magazine* should record revenue for this situation.

b. the amount of revenue *Seacoast Magazine* should record for eight issues.

Learning Objective 2

S3-4 Applying the matching principle

Suppose on January 1, Andrew's Tavern prepaid rent of $16,800 for the full year.

At November 30, how much rent expense should be recorded for the period January 1 through November 30?

Learning Objective 3

S3-5 Identifying types of adjusting entries

A select list of transactions for Anuradha's Goals follows:

Apr. 1	Paid six months of rent, $4,800.
10	Received $1,200 from customer for six-month service contract that began April 1.
15	Purchased a computer for $1,000.
18	Purchased $300 of office supplies on account.
30	Work performed but not yet billed to customer, $500.
30	Employees earned $600 in salaries that will be paid May 2.

For each transaction, identify what type of adjusting entry would be needed. Select from the following four types of adjusting entries: deferred expense, deferred revenue, accrued expense, and accrued revenue.

Learning Objective 3

S3-6 Journalizing and posting adjusting entries for prepaid rent

On September 1, Big Fan of Toledo prepaid six months of rent, $3,300.

Requirements

1. Record the journal entry for the September 1 payment.
2. Record the adjusting entry required at September 30.
3. Using T-accounts, post the journal entry and adjusting entry to the accounts involved and show their balances at September 30. (Ignore the Cash account.)

Learning Objective 3

S3-7 Journalizing and posting an adjusting entry for office supplies

On November 1, Carlisle Equipment had a beginning balance in the Office Supplies account of $600. During the month, Carlisle purchased $2,300 of office supplies. At November 30, Carlisle Equipment had $500 of office supplies on hand.

Requirements

1. Open the Office Supplies T-account, and enter the beginning balance and purchase of office supplies.
2. Record the adjusting entry required at November 30.
3. Post the adjusting entry to the two accounts involved, and show their balances at November 30.

S3-8 Journalizing and posting an adjusting entry for depreciation and determining book value

Learning Objective 3

On October 1, Orlando Gold Exchange paid cash of $57,600 for computers that are expected to remain useful for three years. At the end of three years, the value of the computers is expected to be zero.

Requirements

1. Calculate the amount of depreciation for the month of October using the straight-line depreciation method.
2. Record the adjusting entry for depreciation on October 31.
3. Post the purchase of October 1 and the depreciation on October 31 to T-accounts for the following accounts: Computer Equipment, Accumulated Depreciation—Computer Equipment, and Depreciation Expense—Computer Equipment. Show their balances at October 31.
4. What is the computer equipment's book value on October 31?

S3-9 Journalizing and posting an adjusting entry for unearned revenue

Learning Objective 3

Eastside Magazine collects cash from subscribers in advance and then mails the magazines to subscribers over a one-year period.

Requirements

1. Record the journal entry to record the original receipt of $180,000 cash.
2. Record the adjusting entry that *Eastside Magazine* makes to record earning $8,000 in subscription revenue that was collected in advance.
3. Using T-accounts, post the journal entry and adjusting entry to the accounts involved and show their balances after adjustments. (Ignore the Cash account.)

S3-10 Journalizing and posting an adjusting entry for accrued salaries expense

Learning Objective 3

Birch Park Senior Center has a weekly payroll of $12,500. December 31 falls on Wednesday, and Birch Park Senior Center will pay its employees the following Monday (January 5) for the previous full week. Assume Birch Park Senior Center has a five-day workweek and has an unadjusted balance in Salaries Expense of $620,000.

Requirements

1. Record the adjusting entry for accrued salaries on December 31.
2. Post the adjusting entry to the accounts involved, and show their balances after adjustments.
3. Record the journal entry for payment of salaries made on January 5.

S3-11 Journalizing and posting an adjusting entry for accrued interest expense

Learning Objective 3

Resort Travel borrowed $33,000 on September 1, 2018, by signing a one-year note payable to State One Bank. Resort's interest expense on the note payable for the remainder of the fiscal year (September through November) is $355.

Requirements

1. Record the adjusting entry to accrue interest expense at November 30, 2018.
2. Post the adjusting entry to the T-accounts of the two accounts affected by the adjustment.

CHAPTER 3

Learning Objective 3

S3-12 Journalizing an adjusting entry for accrued revenue

At the end of June, Gerber Dental had performed $9,000 of dental services but has not yet billed customers.

Record the adjusting entry for accrued revenue.

Learning Objective 4

S3-13 Preparing an adjusted trial balance

Seth's Tax Services had the following accounts and account balances after adjusting entries. Assume all accounts have normal balances.

Cash	$?	Equipment	$ 11,000
Land	26,000	Accounts Receivable	4,950
Utilities Payable	150	Office Supplies	700
Accounts Payable	3,700	Common Stock	22,600
Accumulated Depreciation—Equipment	1,800	Utilities Expense	1,650
Service Revenue	75,000	Unearned Revenue	900
Supplies Expense	1,100	Depreciation Expense—Equipment	1,900
Dividends	14,000	Salaries Expense	5,600

Prepare the adjusted trial balance for Seth's Tax Services as of December 31, 2018.

Learning Objective 5

S3-14 Determining the effects on financial statements

In recording adjusting entries, Reagan Financial Advisors failed to record the adjusting entries for the following situations:

a. Office supplies on hand, $100.

b. Accrued revenues, $5,000.

c. Accrued interest expense, $250.

d. Depreciation, $800.

e. Unearned revenue that has been earned, $550.

Determine the effects on the income statement and balance sheet by identifying whether assets, liabilities, equity, revenue, and expenses are either overstated or understated. Use the following table. Adjustment *a* has been provided as an example.

Adjustment	Balance Sheet			Income Statement	
Not Recorded	Assets	Liabilities	Equity	Revenue	Expenses
(a)	*Overstated*		*Overstated*		*Understated*

S3-15 Preparing a partial worksheet

Learning Objective 6

Just Right Hair Stylists has begun the preparation of its worksheet as follows:

	A	B	C	D	E	F	G
1	**JUST RIGHT HAIR STYLISTS**						
2	**Worksheet**						
3	**December 31, 2018**						
4							
5	**Account Names**	**Unadjusted Trial Balance**		**Adjustments**		**Adjusted Trial Balance**	
6		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 300					
8	Office Supplies	900					
9	Equipment	20,600					
10	Accumulated Depreciation—Equipment		$ 700				
11	Accounts Payable		500				
12	Interest Payable						
13	Note Payable		2,800				
14	Common Stock		4,200				
15	Service Revenue		17,500				
16	Rent Expense	3,200					
17	Supplies Expense						
18	Depreciation Expense—Equipment						
19	Interest Expense	700					
20	**Total**	**$ 25,700**	**$ 25,700**				
21							

Year-end data include the following:

a. Office supplies on hand, $300.

b. Depreciation, $700.

c. Accrued interest expense, $800.

Complete Just Right's worksheet through the adjusted trial balance section. In the adjustments section, mark each adjustment by letter.

S3A-16 Journalizing the alternative treatment of deferred expenses

Learning Objective 7
Appendix 3A

On October 1, 2018, Kitchen Design paid $15,000 for store rent covering the six-month period ending March 31, 2019.

Requirements

1. Journalize the entry on October 1 by using the alternative treatment of deferred expenses.

2. Record the December 31, 2018 adjusting entry.

S3A-17 Journalizing the alternative treatment of deferred revenues

Learning Objective 7
Appendix 3A

On September 1, 2018, Salem Landscaping collected $24,000 in advance from customers for landscaping services. The service revenue will be earned monthly over the 12-month period ending August 31, 2019.

Requirements

1. Journalize the entry on September 1 by using the alternative treatment of deferred revenues.

2. Record the December 31, 2018 adjusting entry.

CHAPTER 3

> Exercises

Learning Objectives 1, 2

E3-18 Comparing cash and accrual basis accounting and applying the revenue recognition principle

Momentous Occasions is a photography business that shoots videos at college parties. The freshman class pays $1,000 in advance on March 3 to guarantee services for its party to be held on April 2. The sophomore class promises a minimum of $2,800 for filming its formal dance and actually pays cash of $4,100 on February 28 at the dance.

Answer the following questions about the correct way to account for revenue under the accrual basis:

a. Considering the $1,000 paid by the freshman class, on what date was revenue recognized? Did the recognition occur on the same date cash was received?

b. Considering the $4,100 paid by the sophomore class, on what date was revenue recognized? Did the recognition occur on the same date cash was received?

Learning Objectives 1, 2

E3-19 Comparing cash and accrual basis accounting and applying the revenue recognition principle and the matching principle

Chef's Catering completed the following selected transactions during May 2018:

May	1	Prepaid rent for three months, $2,400.
	5	Received and paid electricity bill, $700.
	9	Received cash for meals served to customers, $2,600.
	14	Paid cash for kitchen equipment, $3,000.
	23	Served a banquet on account, $2,800.
	31	Made the adjusting entry for rent (from May 1).
	31	Accrued salary expense, $1,600.
	31	Recorded depreciation for May on kitchen equipment, $50.

Requirements

1. Show whether each transaction would be handled as a revenue or an expense using both the cash basis and accrual basis accounting systems by completing the following table. (Expenses should be shown in parentheses.) Also, indicate the dollar amount of the revenue or expense. The May 1 transaction has been completed as an example.

	Amount of Revenue (Expense) for May	
Date	Cash Basis Amount of Revenue (Expense)	Accrual Basis Amount of Revenue (Expense)
May 1	*$(2,400)*	*$0*

2. After completing the table, calculate the amount of net income or net loss for Chef's Catering under the accrual basis and cash basis accounting systems for May.

3. Considering your results from Requirement 2, which method gives the best picture of the true earnings of Chef's Catering? Why?

E3-20 Determining the amount of prepaid expenses

Learning Objective 3

Consider the facts presented in the following table for Tropical View:

	Situation			
	A	B	C	D
Beginning Prepaid Rent	$1,400	$1,000	$ 200	$ 700
Payments for Prepaid Rent during the year	700	*b*	1,800	*f*
Total amount to account for	2,100	1,600	*c*	*e*
Subtract: Ending Prepaid Rent	800	700	*d*	600
Rent Expense	$ *a*	$900	$1,900	$1,000

Complete the table by filling in the missing values.

E3-21 Journalizing adjusting entries

Learning Objective 3

Consider the following situations:

a. Business receives $3,200 on January 1 for 10-month service contract for the period January 1 through October 31.

b. Total salaries for all employees is $3,600 per month. Employees are paid on the 1st and 15th of the month.

c. Work performed but not yet billed to customers for the month is $1,600.

d. The company pays interest on its $16,000, 4% note payable of $53 on the first day of each month.

Assume the company records adjusting entries monthly. Journalize the adjusting entries needed as of January 31.

E3-22 Journalizing adjusting entries

Learning Objective 3

Consider the following independent situations at December 31:

a. On October 1, a business collected $3,000 rent in advance, debiting Cash and crediting Unearned Revenue. The tenant was paying one year's rent in advance. On December 31, the business must account for the amount of rent it has earned.

b. Salaries expense is $1,800 per day—Monday through Friday—and the business pays employees each Friday. This year, December 31 falls on a Thursday.

c. The unadjusted balance of the Office Supplies account is $3,000. Office supplies on hand total $1,900.

d. Equipment depreciation was $500.

e. On April 1, when the business prepaid $4,320 for a two-year insurance policy, the business debited Prepaid Insurance and credited Cash.

Journalize the adjusting entry needed on December 31 for each situation. Use the letters to label the journal entries.

E3-23 Journalizing adjusting entries

Learning Objective 3

Consider the following situations for Betterton Welding Services:

a. Depreciation for the current year includes equipment, $2,100.

b. Each Monday, Betterton pays employees for the previous week's work. The amount of weekly payroll is $1,400 for a seven-day workweek (Monday to Sunday). This year, December 31 falls on Thursday.

CHAPTER 3

c. The beginning balance of Office Supplies was $2,300. During the year, Betterton purchased office supplies for $3,000, and at December 31 the office supplies on hand totaled $1,000.

d. Betterton prepaid a two full years' insurance on July 1 of the current year, $6,000. Record insurance expense for the year ended December 31.

e. Betterton had earned $2,800 of unearned revenue.

f. Betterton had incurred (but not recorded) $200 of interest expense on a note payable. The interest will not be paid until February 28.

g. Betterton billed customers $3,000 for welding services performed.

Journalize the adjusting entry needed on December 31 for each situation. Use the letters to label the journal entries.

CHAPTER 3

Learning Objective 3

3. Unearned Revenue bal. $800 CR

E3-24 Journalizing adjusting entries and posting to T-accounts

The accounting records of Mackay Architects include the following selected, unadjusted balances at March 31: Accounts Receivable, $1,500; Office Supplies, $700; Prepaid Rent, $2,240; Equipment, $8,000; Accumulated Depreciation—Equipment, $0; Salaries Payable, $0; Unearned Revenue, $900; Service Revenue, $4,100; Salaries Expense, $800; Supplies Expense, $0; Rent Expense, $0; Depreciation Expense—Equipment, $0. The data developed for the March 31 adjusting entries are as follows:

a. Service revenue accrued, $700.

b. Unearned revenue that has been earned, $100.

c. Office Supplies on hand, $300.

d. Salaries owed to employees, $200.

e. One month of prepaid rent has expired, $560.

f. Depreciation on equipment, $120.

Requirements

1. Open a T-account for each account using the unadjusted balances given.

2. Journalize the adjusting entries using the letter and March 31 date in the date column.

3. Post the adjustments to the T-accounts, entering each adjustment by letter. Show each account's adjusted balance.

E3-25 Journalizing adjusting entries and posting to T-accounts

Learning Objective 3

3. Office Supplies bal. $300 DR

The unadjusted trial balance for All Mopped Up Company, a cleaning service, is as follows:

ALL MOPPED UP COMPANY Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 800	
Office Supplies	2,000	
Prepaid Insurance	600	
Equipment	30,000	
Accumulated Depreciation—Equipment		$ 2,000
Accounts Payable		2,400
Salaries Payable		
Unearned Revenue		700
Common Stock		15,300
Dividends	5,000	
Service Revenue		25,000
Salaries Expense	7,000	
Supplies Expense		
Depreciation Expense—Equipment		
Insurance Expense		
Total	$ 45,400	$ 45,400

During the 12 months ended December 31, 2018, All Mopped Up:

a. used office supplies of $1,700.

b. used prepaid insurance of $580.

c. depreciated equipment, $500.

d. accrued salaries expense of $310 that hasn't been paid yet.

e. earned $400 of unearned revenue.

Requirements

1. Open a T-account for each account using the unadjusted balances.
2. Journalize the adjusting entries using the letter and December 31 date in the date column.
3. Post the adjustments to the T-accounts, entering each adjustment by letter. Show each account's adjusted balance.

CHAPTER 3

Note: Exercise E3-26 should be used only in conjunction with Exercise E3-25.

Learning Objective 4

Adj. trial balance $46,210 total

E3-26 Preparing an adjusted trial balance

Refer to the data in Exercise E3-25, and prepare an adjusted trial balance.

Learning Objectives 3, 5

E3-27 Identifying the impact of adjusting entries on the financial statements

Austin Acoustics recorded the following transactions during October:

a. Received $2,500 cash from customer for three months of service beginning October 1 and ending December 31. The company recorded a $2,500 debit to Cash and a $2,500 credit to Unearned Revenue.

b. Employees are paid $3,000 on Monday following the five-day workweek. October 31 is on Friday.

c. The company pays $440 on October 1 for its six-month auto insurance policy. The company recorded a $440 debit to Prepaid Insurance and a $440 credit to Cash.

d. The company purchased office furniture for $8,300 on January 2. The company recorded a $8,300 debit to Office Furniture and an $8,300 credit to Accounts Payable. Annual depreciation for the furniture is $1,000.

e. The company began October with $50 of office supplies on hand. On October 10, the company purchased office supplies on account of $100. The company recorded a $100 debit to Office Supplies and a $100 credit to Accounts Payable. The company used $120 of office supplies during October.

f. The company received its electric bill on October 31 for $325 but did not pay it until November 10.

g. The company paid November's rent of $2,500 on October 30. On October 30, the company recorded an $2,500 debit to Rent Expense and a $2,500 credit to Cash.

Indicate if an adjusting entry is needed for each item on October 31 for the month of October. Assuming the adjusting entry is not made, indicate which specific category or categories of accounts on the financial statements are misstated and if they are overstated or understated. Use the following table as a guide. Item *a* is completed as an example:

Item	Adjusting Entry Needed?	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
(a)	*Yes*	*Liability* *Equity*	*Over* *Under*	*Revenue*	*Under*

Learning Objectives 3, 5

E3-28 Journalizing adjusting entries and analyzing their effect on the income statement

The following data at July 31, 2018, are given for RCO:

a. Depreciation, $600.

b. Prepaid rent expires, $200.

c. Interest expense accrued, $700.

d. Employee salaries owed for Monday through Thursday of a five-day workweek; weekly payroll, $8,000.

e. Unearned revenue earned, $1,000.

f. Office supplies used, $150.

Requirements

1. Journalize the adjusting entries needed on July 31, 2018.
2. Suppose the adjustments made in Requirement 1 were not made. Compute the overall overstatement or understatement of net income as a result of the omission of these adjustments.

Learning Objective 6

1. Adjustments $3,700 total

E3-29 Using the worksheet to record the adjusting journal entries

The worksheet of Best Jobs Employment Service follows but is incomplete.

	A	B	C	D	E	F	G
1	**BEST JOBS EMPLOYMENT SERVICE**						
2	**Worksheet**						
3	**April 30, 2018**						
4							
5	**Account Names**	**Unadjusted Trial Balance**		**Adjustments**		**Adjusted Trial Balance**	
6		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 1,100					
8	Accounts Receivable	4,100					
9	Office Supplies	1,200					
10	Equipment	32,700					
11	Accumulated Depreciation—Equipment		$ 13,900				
12	Salaries Payable						
13	Common Stock		25,200				
14	Dividends	5,300					
15	Service Revenue		9,000				
16	Salaries Expense	2,200					
17	Rent Expense	1,500					
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	**Total**	**$ 48,100**	**$ 48,100**				
21							

The following data at April 30, 2018, are given for Best Jobs Employment Service:

a. Service revenue accrued, $700.

b. Office supplies used, $300.

c. Depreciation on equipment, $1,300.

d. Salaries owed to employees, $1,400.

Requirements

1. Calculate and enter the adjustment amounts directly in the Adjustments columns. Use letters *a* through *d* to label the four adjustments.
2. Calculate and enter the adjusted account balances in the Adjusted Trial Balance columns.
3. Prepare each adjusting journal entry calculated in Requirement 1. Date the entries, and include explanations.

Learning Objective 6

Adj. trial balance $273,700 total

E3-30 Using the worksheet to prepare the adjusted trial balance

The worksheet of Macey's Landscaping Services follows but is incomplete.

MACEY'S LANDSCAPING SERVICES
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance Debit	Unadjusted Trial Balance Credit	Adjustments Debit	Adjustments Credit	Adjusted Trial Balance Debit	Adjusted Trial Balance Credit
Cash	$ 27,400					
Accounts Receivable	6,700		(h) $ 3,500			
Office Supplies	500			(b) $ 350		
Prepaid Rent	2,300			(a) 1,150		
Equipment	50,000					
Accumulated Depreciation—Equipment				(c) 1,300		
Trucks	114,000					
Accumulated Depreciation—Trucks				(d) 1,900		
Accounts Payable		$ 3,800				
Utilities Payable		300				
Salaries Payable				(f) 7,200		
Interest Payable				(g) 300		
Unearned Revenue		4,500	(e) 3,200			
Notes Payable		25,000				
Common Stock		141,900				
Dividends	21,000					
Service Revenue		84,000		(e, h) 6,700		
Rent Expense	9,200		(a) 1,150			
Salaries Expense	23,800		(f) 7,200			
Supplies Expense			(b) 350			
Utilities Expense	4,600					
Depreciation Expense—Equipment			(c) 1,300			
Depreciation Expense—Trucks			(d) 1,900			
Interest Expense			(g) 300			
Total	**$ 259,500**	**$ 259,500**	**$ 18,900**	**$ 18,900**		

Requirements

1. Calculate and enter the adjusted account balances in the Adjusted Trial Balance columns.
2. Describe each adjusting entry. For example, a. Prepaid rent expires, $1,150.

E3A-31 Understanding the alternative treatment of prepaid expenses

Learning Objectives 3, 7
Appendix 3A

At the beginning of the year, office supplies of $1,200 were on hand. During the year, Tempo Air Conditioning Service paid $4,000 for more office supplies. At the end of the year, Tempo has $800 of office supplies on hand.

Requirements

1. Record the adjusting entry assuming that Tempo records the purchase of office supplies by initially debiting an asset account. Post the adjusting entry to the Office Supplies and Supplies Expense T-accounts. Make sure to include the beginning balance and purchase of office supplies in the Office Supplies T-account.
2. Record the adjusting entry assuming that Tempo records the purchase of office supplies by initially debiting an expense account. Post the adjusting entry to the Office Supplies and Supplies Expense T-accounts. Make sure to include the beginning balance in the Office Supplies T-account and the purchase of office supplies in the Supplies Expense T-account.
3. Compare the ending balances of the T-accounts under both approaches. Are they the same?

E3A-32 Understanding the alternative treatment of unearned revenues

Learning Objectives 3, 7
Appendix 3A

At the beginning of the year, Modish Advertising owed customers $2,100 for unearned revenue collected in advance. During the year, Modish received advance cash receipts of $6,100 and earned $20,000 of service revenue (exclusive of any amount earned from advance payments). At year-end, the liability for unearned revenue is $3,100 and unadjusted service revenue is $20,000.

Requirements

1. Record the adjusting entry assuming that Modish records the cash receipt of unearned revenue by initially crediting a liability account. Post the adjusting entry to the Unearned Revenue and Service Revenue T-accounts. Make sure to include the beginning balance and additional unearned revenue in the Unearned Revenue T-account.
2. Record the adjusting entry assuming that Modish records the cash receipt of unearned revenue by initially crediting a revenue account. Post the adjusting entry to the Unearned Revenue and Service Revenue T-accounts. Make sure to include the beginning balance in the Unearned Revenue T-account and the additional unearned revenue in the Service Revenue T-account.
3. Compare the ending balances of the T-accounts under both approaches. Are they the same?

> Problems Group A

P3-33A Journalizing adjusting entries and subsequent journal entries

Learning Objective 3

Laughter Landscaping has collected the following data for the December 31 adjusting entries:

a. Each Friday, Laughter pays employees for the current week's work. The amount of the weekly payroll is $8,000 for a five-day workweek. This year, December 31 falls on a Tuesday. Laughter will pay its employees on January 3.

b. On January 1 of the current year, Laughter purchases an insurance policy that covers two years, $8,000.

c. The beginning balance of Office Supplies was $4,300. During the year, Laughter purchased office supplies for $5,600, and at December 31 the office supplies on hand total $1,500.

d. During December, Laughter designed a landscape plan and the client prepaid $6,500. Laughter recorded this amount as Unearned Revenue. The job will take several months to complete, and Laughter estimates that the company has earned 40% of the total revenue during the current year.

e. At December 31, Laughter had earned $3,000 for landscape services completed for Turnkey Appliances. Turnkey has stated that it will pay Laughter on January 10.

f. Depreciation for the current year includes Equipment, $3,000; and Trucks, $2,200.

g. Laughter has incurred $250 of interest expense on a $550 interest payment due on January 15.

Requirements

1. Journalize the adjusting entry needed on December 31 for each of the previous items affecting Laughter Landscaping. Assume Laughter records adjusting entries only at the end of the year.
2. Journalize the subsequent journal entries for adjusting entries *a, d,* and *g.*

Learning Objectives 3, 5

P3-34A Journalizing adjusting entries and identifying the impact on financial statements

Griffin Fishing Charters has collected the following data for the December 31 adjusting entries:

a. The company received its electric bill on December 31 for $375 but will not pay it until January 5. (Use the Utilities Payable account.)

b. Griffin purchased a three-month boat insurance policy on November 1 for $1,200. Griffin recorded a debit to Prepaid Insurance.

c. As of December 31, Griffin had earned $3,000 of charter revenue that has not been recorded or received.

d. Griffin's fishing boat was purchased on January 1 at a cost of $33,500. Griffin expects to use the boat for 10 years and that it will have a residual value of $3,500. Determine annual depreciation assuming the straight-line depreciation method is used.

e. On October 1, Griffin received $9,000 prepayment for a deep-sea fishing charter to take place in December. As of December 31, Griffin has completed the charter.

Requirements

1. Journalize the adjusting entries needed on December 31 for Griffin Fishing Charters. Assume Griffin records adjusting entries only at the end of the year.
2. If Griffin had not recorded the adjusting entries, indicate which specific category of accounts on the financial statements would be misstated and if the misstatement is overstated or understated. Use the following table as a guide.

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated

Learning Objectives 3, 4

3. Adjusted trial balance total $75,600

P3-35A Journalizing and posting adjustments to the T-accounts and preparing an adjusted trial balance

The unadjusted trial balance of Anniston Air Purification System at December 31, 2018, and the data needed for the adjustments follow.

ANNISTON AIR PURIFICATION SYSTEM
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 7,600	
Accounts Receivable	19,700	
Prepaid Rent	2,900	
Office Supplies	1,800	
Equipment	22,000	
Accumulated Depreciation—Equipment		$ 3,900
Accounts Payable		2,900
Salaries Payable		
Unearned Revenue		3,100
Common Stock		43,800
Dividends	9,900	
Service Revenue		15,300
Salaries Expense	3,300	
Rent Expense		
Depreciation Expense—Equipment		
Advertising Expense	1,800	
Supplies Expense		
Total	$ 69,000	$ 69,000

Adjustment data at December 31 follow:

a. On December 15, Anniston contracted to perform services for a client receiving $3,100 in advance. Anniston recorded this receipt of cash as Unearned Revenue. As of December 31, Anniston has completed $2,100 of the services.

b. Anniston prepaid two months of rent on December 1. (Assume the Prepaid Rent balance as shown on the unadjusted trial balance represents the two months of rent prepaid on December 1.)

c. Anniston used $750 of office supplies.

d. Depreciation for the equipment is $850.

e. Anniston received a bill for December's online advertising, $1,100. Anniston will not pay the bill until January. (Use Accounts Payable.)

f. Anniston pays its employees on Monday for the previous week's wages. Its employees earn $3,500 for a five-day workweek. December 31 falls on Wednesday this year.

g. On October 1, Anniston agreed to provide a four-month air system check (beginning October 1) for a customer for $3,400. Anniston has completed the system check every month, but payment has not yet been received and no entries have been made.

CHAPTER 3

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the T-accounts with the unadjusted balances. Post the adjusting entries to the T-accounts.
3. Prepare the adjusted trial balance.
4. How will Anniston Air Purification System use the adjusted trial balance?

Learning Objectives 3, 4

3. Adjusted trial balance $572,040 total

P3-36A Journalizing and posting adjustments to the four-column accounts and preparing an adjusted trial balance

The unadjusted trial balance of Guthrie Inn Company at December 31, 2018, and the data needed for the adjustments follow.

GUTHRIE INN COMPANY
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 13,500	
Accounts Receivable	15,100	
Prepaid Insurance	4,600	
Office Supplies	800	
Building	530,000	
Accumulated Depreciation—Building		$ 260,000
Accounts Payable		1,710
Salaries Payable		
Unearned Revenue		3,600
Common Stock		288,950
Dividends	2,340	
Service Revenue		15,500
Salaries Expense	2,800	
Insurance Expense		
Depreciation Expense—Building		
Advertising Expense	620	
Supplies Expense		
Total	$ 569,760	$ 569,760

Adjustment data at December 31 follow:

a. As of December 31, Guthrie had $700 of Prepaid Insurance remaining.

b. At the end of the month, Guthrie had $500 of office supplies remaining.

c. Depreciation on the building is $1,200.

d. Guthrie pays its employees weekly on Friday. Its employees earn $1,800 for a five-day workweek. December 31 falls on Wednesday this year.

e. On November 20, Guthrie contracted to perform services for a client receiving $3,600 in advance. Guthrie recorded this receipt of cash as Unearned Revenue. As of December 31, Guthrie has $1,600 still unearned.

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the accounts (use a four-column ledger) with the unadjusted balances. Post the adjusting entries to the ledger accounts.
3. Prepare the adjusted trial balance.
4. Assuming the adjusted trial balance has total debits equal to total credits, does this mean that the adjusting entries have been recorded correctly? Explain.

P3-37A Using the worksheet to record the adjusting journal entries

Learning Objective 6

Greavy Theater Production Company's partially completed worksheet as of December 31, 2018, follows.

	A	B	C	D	E	F	G
1	**GREAVY THEATER PRODUCTION COMPANY**						
2	**Worksheet**						
3	**December 31, 2018**						
4							
5	**Account Names**	**Unadjusted Trial Balance**		**Adjustments**		**Adjusted Trial Balance**	
6		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 4,300					
8	Accounts Receivable	5,900					
9	Office Supplies	1,900					
10	Prepaid Insurance	4,550					
11	Equipment	30,000					
12	Accumulated Depreciation—Equipment		$ 7,600				
13	Accounts Payable		3,600				
14	Salaries Payable						
15	Common Stock		21,950				
16	Dividends	30,500					
17	Service Revenue		77,000				
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	Utilities Expense	5,500					
21	Salaries Expense	27,500					
22	Insurance Expense						
23	**Total**	**$ 110,150**	**$ 110,150**				
24							

Adjustment data at December 31 follow:

a. As of December 31, Greavy had performed $500 of service revenue but has not yet billed customers.

b. At the end of the month, Greavy had $700 of office supplies remaining.

c. Prepaid Insurance of $3,900 remained.

d. Depreciation expense, $4,000.

e. Accrued salaries expense of $200 that hasn't been paid yet.

Requirements

1. Complete the worksheet. Use letters *a* through *e* to label the five adjustments.
2. Journalize the adjusting entries.

CHAPTER 3

Learning Objectives 3, 7
Appendix 3A

P3A-38A Understanding the alternative treatment of prepaid expenses and unearned revenues

Rapid Way Pack'n Mail completed the following transactions during 2018:

Nov. 1	Paid $9,600 store rent covering the six-month period ending April 30, 2019.
Nov. 1	Paid $6,000 insurance covering the five-month period ending March 31, 2019.
Dec. 1	Collected $9,000 cash in advance from customers. The service revenue will be earned $1,800 monthly over the five-month period ending April 30, 2019.
Dec. 1	Collected $7,200 cash in advance from customers. The service revenue will be earned $2,400 monthly over the three-month period ending February 28, 2019.

Requirements

1. Journalize the transactions assuming that Rapid Way debits an asset account for prepaid expenses and credits a liability account for unearned revenues.
2. Journalize the related adjusting entries at December 31, 2018.
3. Post the journal and adjusting entries to the T-accounts, and show their balances at December 31, 2018. (Ignore the Cash account.)
4. Repeat Requirements 1–3. This time, debit an expense account for prepaid expenses and credit a revenue account for unearned revenues.
5. Compare the account balances in Requirements 3 and 4. They should be equal.

> Problems Group B

Learning Objective 3

P3-39B Journalizing adjusting entries and subsequent journal entries

Lopez Landscaping has the following data for the December 31 adjusting entries:

a. Each Friday, Lopez pays employees for the current week's work. The amount of the weekly payroll is $6,500 for a five-day workweek. This year, December 31 falls on a Wednesday. Lopez will pay its employees on January 2.

b. On January 1 of the current year, Lopez purchases an insurance policy that covers two years, $7,500.

c. The beginning balance of Office Supplies was $3,700. During the year, Lopez purchased office supplies for $5,800, and at December 31 the office supplies on hand total $3,000.

d. During December, Lopez designed a landscape plan and the client prepaid $6,000. Lopez recorded this amount as Unearned Revenue. The job will take several months to complete, and Lopez estimates that the company has earned 70% of the total revenue during the current year.

e. At December 31, Lopez had earned $7,500 for landscape services completed for Tomball Appliances. Tomball has stated that it will pay Lopez on January 10.

f. Depreciation for the current year includes Equipment, $3,800; and Trucks, $1,400.

g. Lopez has incurred $250 of interest expense on a $350 interest payment due on January 15.

Requirements

1. Journalize the adjusting entry needed on December 31 for each of the previous items affecting Lopez Landscaping. Assume Lopez records adjusting entries only at the end of the year.
2. Journalize the subsequent journal entries for adjusting entries *a, d,* and *g*.

P3-40B Journalizing adjusting entries and identifying the impact on financial statements

Learning Objectives 3, 5

Harrison Fishing Charters has collected the following data for the December 31 adjusting entries:

a. The company received its electric bill on December 31 for $375 but will not pay it until January 5. (Use the Utilities Payable account.)

b. Harrison purchased a three-month boat insurance policy on November 1 for $3,600. Harrison recorded a debit to Prepaid Insurance.

c. As of December 31, Harrison had earned $1,000 of charter revenue that has not been recorded or received.

d. Harrison's fishing boat was purchased on January 1 at a cost of $56,500. Harrison expects to use the boat for five years and that it will have a residual value of $6,500. Determine annual depreciation assuming the straight-line depreciation method is used.

e. On October 1, Harrison received $5,000 prepayment for a deep-sea fishing charter to take place in December. As of December 31, Harrison has completed the charter.

Requirements

1. Journalize the adjusting entries needed on December 31 for Harrison Fishing Charters. Assume Harrison records adjusting entries only at the end of the year.
2. If Harrison had not recorded the adjusting entries, indicate which specific category of accounts on the financial statements would be misstated and if the misstatement is overstated or understated. Use the following table as a guide:

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated

CHAPTER 3

Learning Objectives 3, 4

3. Adjusted trial balance total $69,800

P3-41B Journalizing and posting adjustments to the T-accounts and preparing an adjusted trial balance

The unadjusted trial balance of Avery Air Purification System at December 31, 2018, and the data needed for the adjustments follow.

AVERY AIR PURIFICATION SYSTEM
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 7,100	
Accounts Receivable	19,100	
Prepaid Rent	2,400	
Office Supplies	1,400	
Equipment	20,000	
Accumulated Depreciation—Equipment		$ 3,800
Accounts Payable		3,500
Salaries Payable		
Unearned Revenue		2,700
Common Stock		39,300
Dividends	9,400	
Service Revenue		15,900
Salaries Expense	3,900	
Rent Expense		
Depreciation Expense—Equipment		
Advertising Expense	1,900	
Supplies Expense		
Total	$ 65,200	$ 65,200

Adjustment data at December 31 follow:

a. On December 15, Avery contracted to perform services for a client receiving $2,700 in advance. Avery recorded this receipt of cash as Unearned Revenue. As of December 31, Avery has completed $2,100 of the services.

b. Avery prepaid two months of rent on December 1. (Assume the Prepaid Rent balance as shown on the unadjusted trial balance represents the two months of rent prepaid on December 1.)

c. Avery used $750 of office supplies during the month.

d. Depreciation for the equipment is $800.

e. Avery received a bill for December's online advertising, $500. Avery will not pay the bill until January. (Use Accounts Payable.)

f. Avery pays its employees weekly on Monday for the previous week's wages. Its employees earn $2,000 for a five-day workweek. December 31 falls on Wednesday this year.

g. On October 1, Avery agreed to provide a four-month air system check (beginning October 1) for a customer for $2,800. Avery has completed the system check every month, but payment has not yet been received and no entries have been made.

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the T-accounts with the unadjusted balances. Post the adjusting entries to the T-accounts.
3. Prepare the adjusted trial balance.
4. How will Avery Air Purification System use the adjusted trial balance?

P3-42B Journalizing and posting adjustments to the four-column accounts and preparing an adjusted trial balance

Learning Objectives 3, 4

3. Adjusted trial balance total $557,750

The unadjusted trial balance of Midway Inn Company at December 31, 2018, and the data needed for the adjustments follow.

MIDWAY INN COMPANY
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 14,500	
Accounts Receivable	15,100	
Prepaid Insurance	1,400	
Office Supplies	700	
Building	518,000	
Accumulated Depreciation—Building		$ 310,000
Accounts Payable		4,210
Salaries Payable		
Unearned Revenue		1,600
Common Stock		222,160
Dividends	1,890	
Service Revenue		16,900
Salaries Expense	2,600	
Insurance Expense		
Depreciation Expense—Building		
Advertising Expense	680	
Supplies Expense		
Total	$ 554,870	$ 554,870

Adjustment data at December 31 follow:

a. As of December 31, Midway Inn had $800 of Prepaid Insurance remaining.

b. At the end of the month, Midway Inn had $500 of office supplies remaining.

c. Depreciation on the building is $2,100.

d. Midway Inn pays its employees on Friday for the weekly salaries. Its employees earn $1,300 for a five-day workweek. December 31 falls on Wednesday this year.

e. On November 20, Midway Inn contracted to perform services for a client receiving $1,600 in advance. Midway Inn recorded this receipt of cash as Unearned Revenue. As of December 31, Midway Inn has $1,400 still unearned.

CHAPTER 3

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the accounts (use a four-column ledger) with the unadjusted balances. Post the adjusting entries to the ledger accounts.
3. Prepare the adjusted trial balance.
4. Assuming the adjusted trial balance has total debits equal to total credits, does this mean that the adjusting entries have been recorded correctly? Explain.

Learning Objective 6

P3-43B Using the worksheet to record the adjusting journal entries

Galaxy Theater Production Company's partially completed worksheet as of December 31, 2018, follows.

	A	B	C	D	E	F	G
1	**GALAXY THEATER PRODUCTION COMPANY**						
2	**Worksheet**						
3	**December 31, 2018**						
4							
5	**Account Names**	**Unadjusted Trial Balance**		**Adjustments**		**Adjusted Trial Balance**	
6		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 3,600					
8	Accounts Receivable	5,700					
9	Office Supplies	1,500					
10	Prepaid Insurance	900					
11	Equipment	23,000					
12	Accumulated Depreciation—Equipment		$ 8,500				
13	Accounts Payable		4,600				
14	Salaries Payable						
15	Common Stock		9,900				
16	Dividends	26,000					
17	Service Revenue		72,000				
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	Utilities Expense	4,300					
21	Salaries Expense	30,000					
22	Insurance Expense						
23	**Total**	**$95,000**	**$95,000**				
24							

Adjustment data at December 31 follow:

a. As of December 31, Galaxy had performed $900 of service revenue but has not yet billed customers.

b. At the end of the month, Galaxy had $500 of office supplies remaining.

c. Prepaid Insurance of $600 remained.

d. Depreciation expense, $4,200.

e. Accrued salaries expense of $150 that hasn't been paid yet.

Requirements

1. Complete the worksheet. Use letters *a* through *e* to label the five adjustments.
2. Journalize the adjusting entries.

P3A-44B Understanding the alternative treatment of prepaid expenses and unearned revenues

Learning Objectives 3, 7
Appendix 3A

Sent It Pack'n Mail completed the following transactions during 2018:

Nov. 1	Paid $6,000 store rent covering the four-month period ending February 28, 2019.
1	Paid $7,800 insurance covering the six-month period ending April 30, 2019.
Dec. 1	Collected $12,000 cash in advance from customers. The service revenue will be earned $2,400 monthly over the five-month period ending April 30, 2019.
1	Collected $7,500 cash in advance from customers. The service revenue will be earned $1,500 monthly over the five-month period ending April 30, 2019.

Requirements

1. Journalize the transactions assuming that Sent It Pack'n Mail debits an asset account for prepaid expenses and credits a liability account for unearned revenues.
2. Journalize the related adjusting entries at December 31, 2018.
3. Post the journal and adjusting entries to the T-accounts, and show their balances at December 31, 2018. (Ignore the Cash account.)
4. Repeat Requirements 1–3. This time debit an expense account for prepaid expenses and credit a revenue account for unearned revenues.
5. Compare the account balances in Requirements 3 and 4. They should be equal.

CRITICAL THINKING

> Using Excel

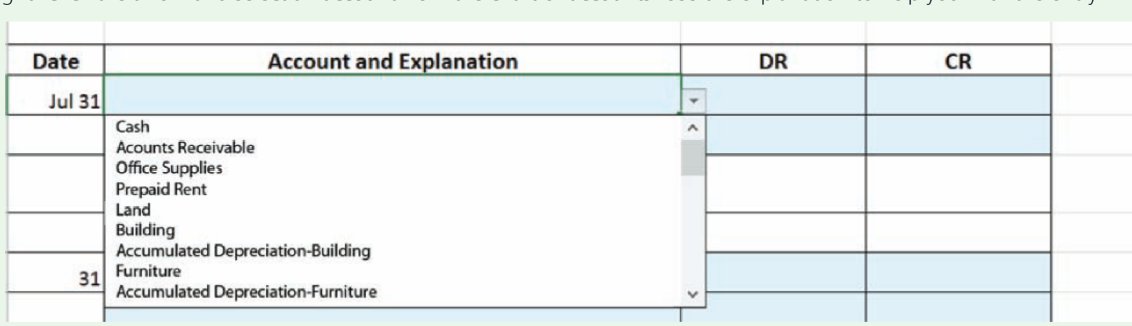
P3-45 Using Excel to journalize and post adjusting entries, and to create the Adjustments and Adjusted Trial Balance columns of the worksheet

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

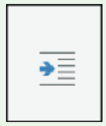
Cedar River Corporation started operations on July 1, 2018. The transactions that occurred during the month were journalized and posted, and a trial balance was prepared at the end of the month. The month-end adjusting entries are to be journalized and posted to T-accounts. A worksheet is to be used to help prepare the adjusted trial balance.

Requirements

1. Use Excel to journalize the adjusting entries. Use the blue shaded areas for inputs.
   a. To record the account name in the journal, click in the Account and Explanation column. A drop down arrow will appear to the right. Click the arrow and select an account from the chart of accounts. Use the explanation to help you with the entry.



b. Indent the account name of the account to be credited using the indent button on the Home tab. Click the Increase Indent button twice.



2. Once the adjustments have been journalized, post the amounts to the correct side of the T-account. (Note that the balance at the end of the month has been posted as a single entry.)
   a. The T-account totals will be calculated automatically.
   b. Total debits should equal total credits. The debit-credit balance check appears in the top right-hand corner of the T-account worksheet.
3. Use a formula to fill in the Adjustment debit and credit columns on the worksheet by referencing the adjusting entries.
4. Use a formula to add or subtract the adjustments to the trial balance amounts to calculate the amounts in the Adjusted Trial Balance columns.
5. Use a formula to total the Adjustments and Adjusted Trial Balance columns.
6. On the Worksheet
   a. Format the cells requiring dollar signs.
   b. Format the cells requiring a single underline and cells requiring double underlines.
   c. Boldface the totals.

> Continuing Problem

P3-46 Preparing adjusting entries and preparing an adjusted trial balance

This problem continues the Canyon Canoe Company situation from Chapter 2. You will need to use the unadjusted trial balance and posted T-accounts that you prepared in Chapter 2.

At December 31, the business gathers the following information for the adjusting entries:

a. Office supplies on hand, $165

b. Rent of one month has been used. (Hint: See Dec. 1 transaction from Chapter 2)

c. Determine the depreciation on the building using straight-line depreciation. Assume the useful life of the building is five years and the residual value is $5,000. (Hint: The building was purchased on December 1.)

d. $400 of unearned revenue has now been earned.

e. The employee who has been working the rental booth has earned $1,250 in wages that will be paid January 15, 2019.

f. Canyon Canoes has earned $1,850 of canoe rental revenue that has not been recorded or received.

g. Determine the depreciation on the canoes purchased on November 3 using straight-line depreciation. Assume the useful life of the canoes is 4 years and the residual value is $0.

h. Determine the depreciation on the canoes purchased on December 2 using straight-line depreciation. Assume the useful life of the canoes is 4 years and the residual value is $0.

i. Interest expense accrued on the notes payable, $50.

Requirements

1. Journalize and post the adjusting entries using the T-accounts that you completed in Chapter 2. In the T-accounts, denote each adjusting amount as *Adj.* and an account balance as *Balance.*
2. Prepare an adjusted trial balance as of December 31, 2018.

> Practice Set

P3-47 Preparing adjusting entries and preparing an adjusted trial balance

This problem continues the Crystal Clear Cleaning situation from Chapter 2. Start from the unadjusted trial balance that Crystal Clear Cleaning prepared at November 30, 2018:

CRYSTAL CLEAR CLEANING
Unadjusted Trial Balance
November 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$51,650	
Accounts Receivable	4,000	
Cleaning Supplies	320	
Prepaid Rent	4,000	
Prepaid Insurance	4,800	
Equipment	5,400	
Truck	3,000	
Accounts Payable		$ 1,245
Unearned Revenue		15,000
Notes Payable		36,000
Common Stock		18,000
Dividends	1,400	
Service Revenue		5,100
Salaries Expense	400	
Advertising Expense	200	
Utilities Expense	175	
Total	$75,345	$75,345

Consider the following adjustment data:

a. Cleaning supplies on hand at the end of November were $50.
b. One month's combined depreciation on all depreciable assets was estimated to be $150.
c. One month's interest expense is $59.

Requirements

1. Using the data provided from the trial balance, the previous adjustment information, and the information from Chapter 2, prepare all required adjusting journal entries at November 30.
2. Prepare an adjusted trial balance as of November 30 for Crystal Clear Cleaning.

CHAPTER 3

> Tying It All Together Case 3-1

Before you begin this assignment, review the Tying It All Together feature in the chapter.

iHeartMedia, Inc. in their annual report for the year ending December 31, 2015, state that the plant assets reported on its balance sheet includes the following:

Plant Asset	Useful Life
Buildings and improvements	10 to 39 years
Structures	5 to 15 years
Towers, transmitters, and studio equipment	7 to 20 years
Furniture and other equipment	3 to 20 years

Depreciation is computed using the straight-line method.

Requirements

1. Suppose iHeartMedia, Inc. purchases a new advertising structure for $100,000 on August 1. The residual value of the structure is $4,000 and the useful life is 10 years. How would iHeartMedia record the depreciation expense on December 31 in the first year of use? What about the second year of use?

2. What would be the book value of the structure at the end of the first year? What would be the book value of the structure at the end of the second year?

3. What would be the impact on iHeartMedia, Inc. financial statements if they failed to record the adjusting entry related to the structure?

> Decision Case 3-1

One year ago, Tyler Stasney founded Swift Classified Ads. Stasney remembers that you took an accounting course while in college and comes to you for advice. He wishes to know how much net income his business earned during the past year in order to decide whether to keep the company going. His accounting records consist of the T-accounts from his ledger, which were prepared by an accountant who moved to another city. The ledger at December 31 follows. The accounts have *not* been adjusted.

Cash

Dec. 31 5,800	

Accounts Receivable

Dec. 31 12,000	

Prepaid Rent

Jan. 2 2,800	

Office Supplies

Jan. 2 2,600	

Equipment

Jan. 2 36,000	

Accumulated Depreciation—Equipment

Accounts Payable

	21,500 Dec. 31

Unearned Revenue

	4,000 Dec. 31

Salaries Payable

Common Stock

	20,000 Dec. 31

Dividends

Dec. 31 28,000	

Service Revenue

	59,500 Dec. 31

Salaries Expense

Dec. 31 17,000	

Depreciation Expense—Equipment

Rent Expense

Utilities Expense

Dec. 31 800	

Supplies Expense

Stasney indicates that at year-end, customers owe the business $1,600 for accrued service revenue. These revenues have not been recorded. During the year, Swift Classified Ads collected $4,000 service revenue in advance from customers, but the business earned only $900 of that amount. Rent expense for the year was $2,400, and the business used up $1,700 of the supplies. Swift determines that depreciation on its equipment was $5,000 for the year. At December 31, the business owes an employee $1,200 accrued salary.

Help Swift Classified Ads compute its net income for the year. Advise Stasney whether to continue operating Swift Classified Ads.

> Ethical Issue 3-1

The net income of Steinbach & Sons, a landscaping company, decreased sharply during 2018. Mort Steinbach, owner and manager of the company, anticipates the need for a bank loan in 2019. Late in 2018, Steinbach instructs the company's accountant to record $2,000 service revenue for landscape services for the Steinbach family, even though the services will not be performed until January 2019. Steinbach also tells the accountant *not* to make the following December 31, 2018, adjusting entries:

Salaries owed to employees	$ 900
Prepaid insurance that has expired	400

Requirements

1. Compute the overall effects of these transactions on the company's reported net income for 2018.
2. Why is Steinbach taking this action? Is his action ethical? Give your reason, identifying the parties helped and the parties harmed by Steinbach's action.
3. As a personal friend, what advice would you give the accountant?

> Fraud Case 3-1

XM, Ltd. was a small engineering firm that built high-tech robotic devices for electronics manufacturers. One very complex device was partially completed at the end of 2018. Barb McLauren, head engineer, knew the experimental technology was a failure and XM would not be able to complete the $20,000,000 contract next year. However, the corporation was getting ready to be sold in January. She told the controller that the device was 80% complete at year-end and on track for successful completion the following spring; the controller accrued 80% of the contract revenue at December 31, 2018. McLauren sold the company in January 2019 and retired. By mid-year, it became apparent that XM would not be able to complete the project successfully and the new owner would never recoup his investment.

Requirements

1. For complex, high-tech contracts, how does a company determine the percentage of completion and the amount of revenue to accrue?
2. What action do you think was taken by XM in 2019 with regard to the revenue that had been accrued the previous year?

CHAPTER 3

> Financial Statement Case 3-1

Target Corporation—like all other businesses—makes adjusting entries at year-end in order to measure assets, liabilities, revenues, and expenses properly. Examine Target Corporation's balance sheet and income statement in its Fiscal 2015 Annual Report. Visit http://www.pearsonhighered.com/Horngren to view a link to Target Corporation's annual report.

Requirements

1. Which asset accounts might Target record adjusting entries for?
2. Which liability accounts might Target record adjusting entries for?
3. Review Note 14 (Property and Equipment) in the Notes to Consolidated Financial Statements. How are property, plant, and equipment carried on the balance sheet? How is depreciation of these assets calculated? What is the range of useful lives used when depreciating these assets?

> Communication Activity 3-1

In 75 words or fewer, explain adjusting journal entries.

> Quick Check Answers

1. a **2.** a **3.** b **4.** c **5.** a **6.** a **7.** b **8.** d **9.** c **10A.** b

Chapter 3
The Adjusting Process

Review Questions

1. Cash basis accounting records revenues only when cash is received and expenses only when cash is paid. Accrual basis accounting records revenues when earned and expenses when incurred.

2. Accrual basis accounting is consistent with generally accepted accounting principles.

3. The time period concept requires companies to divide its activities into small time segments such as months, quarters, or years.

4. A fiscal year is an accounting year of any 12 consecutive months. A company might choose to use a fiscal year that is not a calendar year, if the low point in business activity is other than December 31.

5. Under the revenue recognition principle, revenue is determined using a five step process:

Step 1: Identify the contract with the customer.

Step 2: Identify the performance obligations in the contract.

Step 3: Determine the transaction price.

Step 4: Allocate the transaction price to the performance obligations in the contract.

Step 5: Recognize revenue when (or as) the entity satisfies each performance obligation.

In essence, the company records revenue when the entity satisfies each performance obligation.

6. Under the matching principle, expenses are linked to the revenues they generate. Expenses are recorded in the same period as the revenues generated by the expenses.

7. Adjusting entries are completed at the end of the accounting period to record revenues in the period in which they are earned and expenses in the period in which they are incurred. Adjusting entries also update asset and liability accounts. Adjustments are needed to properly measure net income (loss) on the income statement and assets and liabilities on the balance sheet.

8. The two basic categories of adjusting entries are deferrals and accruals.

- Two examples of deferrals are prepaid expenses (such as Prepaid Rent and Office Supplies) and unearned revenues (such as Unearned Service Revenue).

- Two examples of accruals are accrued expenses (such as Accrued Salaries Expense) and accrued revenues (such as Accrued Service Revenue).

9. A deferred expense is an advance payment of a future expense, and is considered an asset rather than an expense. When the prepayment is used up, the used portion of the asset becomes an expense via an adjusting entry. An example of a deferred expense is Prepaid Insurance.

10. The process of allocating the cost of a plant asset over its useful life is called depreciation.

11. A contra account is an account that is paired with and listed immediately after its related account in the chart of accounts and associated financial statement, and whose normal balance is the opposite of the balance of the related account.

12. When recording depreciation expense, the Accumulated Depreciation account is credited.

13. Accumulated depreciation is the sum of all depreciation expense recorded to date for a depreciable asset.

14. Book value is a depreciable asset's cost minus accumulated depreciation. Book value represents the cost invested in the asset that the company has not yet expensed.

15. Deferred revenue is a liability created when a company collects cash from customers in advance of doing work. For example, an example of a deferred revenue is the collection of cash for services to be provided by the company in the future.

16. An accrued expense is an expense that a company has incurred but not yet paid. For example, salaries expense is incurred by a company as employees work, even though the company might not pay the employees until a later period.

17. An accrued revenue is a revenue that a company has earned but not yet collected in cash. For example, service revenue is earned by a company as it provides services to a customer, even though the company might not collect cash from the customer until a later period.

18. The two rules to remember about adjusting entries are:

1. Adjusting entries never involve the Cash account.
2. Adjusting entries either
   a. Increase a revenue account (credit revenue) or
   b. Increase an expense account (debit expense).

19. An adjusted trial balance is prepared after adjustments have been journalized and posted. An adjusted trial balance is a list of all of the accounts with their adjusted balances, and its purpose is to ensure that total debits equal total credits of all accounts. The adjusted trial balance is used to prepare the final financial statements.

20. If an accrued expense is not recorded at the end of the year, the financial statements will be inaccurate. On the balance sheet, liabilities will be understated and equity will be overstated. On the income statement, expenses will be understated (thus net income will be overstated).

21. A worksheet is an internal document that helps summarize data for the preparation of the financial statements. As a summary device, it helps identify the accounts that need adjustments. On a worksheet, accounts are listed, the unadjusted balances in the accounts are copied directly from the ledger (the unadjusted trial balance), adjustments are entered, and the adjusted trial balance is completed (from which the financial statements can be prepared).

22A. If a payment of a deferred expense was recorded under the alternative treatment, an expense account would be debited at the time of payment.

23A. If a payment of a deferred expense was recorded under the alternative treatment, an asset account would be debited in the adjusting entry.

Short Exercises

S3-1

a. $3,000 advertising expense using cash basis

b. $600 * advertising expense using accrual basis

* Calculations:

$3,000	Advertising prepaid on January 1 for 10 months
÷ 10	Months
$300	Advertising expense per month

Thus,

$300	Advertising expense per month
× 2	months
$600	Advertising expense for January and February

S3-2

a. $ 900 service revenue using cash basis

b. $2,200 * service revenue using accrual basis

* Calculations:

$900 + $1,300 = $2,200 service revenue

S3-3

a. *Seacoast Magazine* should record revenue when each performance obligation has been satisfied – i.e. when the company mails the magazines to subscribers (not when the cash is collected in advance). The company should record revenue monthly.

b. *Seacoast Magazine* should record $16 of revenue for eight issues.

Calculations:

$36 collected in advance for 18 issues / 18 issues = $2 revenue earned per issue

Thus,

$2 revenue per issue × 8 issues = $16 revenue earned for 8 issues

S3-4

At November 30, rent expense of $15,400 should be recorded.

Calculations:

$16,800	Rent prepaid on January 1 for 1 year
÷ 12	Months
$ 1,400	Rent expense per month

Thus,

$ 1,400	Rent expense per month
× 11	Months
$15,400	Rent expense for January through November

S3-5

April 1:	Deferred expense
10:	Deferred revenue
15:	Deferred expense
18:	Deferred expense
30:	Accrued revenue
30:	Accrued expense

S3-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Prepaid Rent	3,300	
	Cash		3,300
	To record rent paid in advance.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Sep. 30	Rent Expense	550 *	
	Prepaid Rent		550 *
	To record rent expense.		

* Calculations:

$3,300	Rent prepaid on September 1 for 6 months
÷ 6	months
$ 550	Rent expense for September

Requirement 3

Prepaid Rent

Sep. 1	3,300	550	Sep. 30
Bal.	2,750		

Rent Expense

Sep. 30	550		
Bal.	550		

S3-7
Requirement 1

Office Supplies			
Nov. 1	600		
	2,300		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Nov. 30	Supplies Expense	2,400*	
	Office Supplies		2,400*
	To record office supplies used.		

* Calculations:

$ 600	Office supplies beginning balance
2,300	Office supplies purchased during the month
2,900	Office supplies balance before adjustment
(500)	Office supplies on hand
$2,400	Office supplies used

Requirement 3

Office Supplies			
Nov. 1	600	2,400	Nov. 30
	2,300		
Bal.	500		

Supplies Expense			
Nov. 30	2,400		
Bal.	2,400		

S3-8
Requirement 1

Straight-line depreciation per month = (Cost – Residual Value) / Useful Life

= ($57,600 – $0) ÷ 3 years

= $19,200 per year / 12 months

= $1,600

S3-8, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Depreciation Expense—Computer Equipment	1,600	
	Accumulated Depreciation—Computer Equipment		1,600
	To record depreciation on computer equipment.		

Requirement 3

Computer Equipment

Oct. 1	57,600		
Bal.	57,600		

Accumulated Depreciation—
Computer Equipment

		1,600	Oct. 31
		1,600	Bal.

Depreciation Expense—
Computer Equipment

Oct. 31	1,600		
Bal.	1,600		

Requirement 4

Computer Equipment	$ 57,600
Less: Accumulated Depreciation—Computer Equipment	(1,600)
Book value of computer equipment	$ 56,000

S3-9
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Cash	180,000	
	Unearned Revenue		180,000
	To record unearned subscription revenue.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Unearned Revenue	8,000	
	Subscription Revenue		8,000
	To record subscription revenue earned that was collected in advance.		

Requirement 3

Unearned Revenue		
8,000	180,000	
	172,000	Bal.

Subscription Revenue		
	8,000	
	8,000	Bal.

S3-10
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	7,500*	
	Salaries Payable		7,500*
	To accrue salaries expense.		

* Calculations:

$12,500	Payroll for a 5-day work week
÷ 5	work days
$2,500	Salaries expense per work day

Thus,

$2,500	Salaries expense per work day
×3	work days
$7,500	Salaries expense for Monday through Wednesday

Requirement 2

Salaries Payable

		7,500	Dec. 31
		7,500	Bal.

Salaries Expense

	620,000	
Dec 31.	7,500	
Bal.	627,500	

S3-10, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Jan. 5	Salaries Expense	5,000*	
	Salaries Payable	7,500	
	Cash		12,500
	To record payment of salaries.		

* Calculations:

$2,500	Salaries expense per work day
×2	work days
$5,000	Salaries expense for Thursday through Friday

S3-11
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Nov. 30	Interest Expense	355	
	Interest Payable		355
	To accrue interest expense.		

Requirement 2

Interest Payable

Debit	Credit	
	355	Nov. 30
	355	Bal.

Interest Expense

	Debit	Credit
Nov. 30	355	
Bal.	355	

S3-12

Date	Accounts and Explanation	Debit	Credit
June 30	Accounts Receivable	9,000	
	Service Revenue		9,000
	To accrue service revenue.		

S3-13

SETH'S TAX SERVICES Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 37,250	
Accounts Receivable	4,950	
Office Supplies	700	
Land	26,000	
Equipment	11,000	
Accumulated Depreciation—Equipment		$ 1,800
Accounts Payable		3,700
Utilities Payable		150
Unearned Revenue		900
Common Stock		22,600
Dividends	14,000	
Service Revenue		75,000
Salaries Expense	5,600	
Depreciation Expense—Equipment	1,900	
Supplies Expense	1,100	
Utilities Expense	1,650	
Total	$ 104,150	$ 104,150

S3-14

Adjustment Not Recorded	Balance Sheet			Income Statement	
	Assets	Liabilities	Equity	Revenue	Expenses
a.	Overstated		Overstated		Understated
b.	Understated		Understated	Understated	
c.		Understated	Overstated		Understated
d.	Overstated		Overstated		Understated
e.		Overstated	Understated	Understated	

S3-15

JUST RIGHT HAIR STYLISTS Worksheet December 31, 2018						
Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 300				$ 300	
Office Supplies	900			$ 600 a.	300	
Equipment	20,600				20,600	
Accumulated Depreciation—Equipment		$ 700		700 b.		$ 1,400
Accounts Payable		500				500
Interest Payable				800 c.		800
Note Payable		2,800				2,800
Common Stock		4,200				4,200
Service Revenue		17,500				17,500
Rent Expense	3,200				3,200	
Supplies Expense			a. $ 600		600	
Depreciation Expense—Equipment			b. 700		700	
Interest Expense	700		c. 800		1,500	
Total	$ 25,700	$ 25,700	$ 2,100	$ 2,100	$ 27,200	$ 27,200

S3A-16
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 1	Rent Expense	15,000	
	Cash		15,000
	To record rent paid in advance.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Prepaid Rent	7,500 *	
	Rent Expense		7,500 *
	To record prepaid rent.		

* Calculations:

$15,000	Rent prepaid on October 1 for 6 months
÷ 6	Months
$ 2,500	Rent expense per month

Thus,

$ 2,500	
×3	Months
$7,500	Rent still prepaid on December 31

S3A-17
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Cash	24,000	
	Service Revenue		24,000
	To record cash collected for future services.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	16,000 *	
	Unearned Revenue		16,000 *
	To record unearned revenue.		

* Calculations:

\$24,000	Collected in advance on September 1 for 12 months
÷ 12	Months
\$ 2,000	Revenue earned per month

Thus,

\$ 2,000	
× 8	Months Remaining
\$16,000	Revenue still unearned on December 31

E3-18

a. Considering the $1,000 paid by the freshman class, the revenue was recognized on April 2. The revenue (April 2) was not recognized on the same date as cash was received (March 3).

b. Considering the $4,100 paid by the sophomore class, the revenue was recognized on February 28. The revenue was recognized on the same date as cash was received.

E3-19
Requirement 1

Amount of Revenue (Expense) for May		
Date	Cash Basis Amount of Revenue (Expense)	Accrual Basis Amount of Revenue (Expense)
May 1	*$(2,400)*	*$ (0)*
5	(700)	(700)
9	2,600	2,600
14	(3,000)	0
23	0	2,800
31	0	(800) *
31	0	(1,600)
31	0	(50)

* Calculations:

$2,400	Rent prepaid on May 1 for 3 months
÷ 3	Months
$ 800	Rent expense for May

Requirement 2

Net income (loss) under cash basis is ($3,500).
Calculations:

Net Income (Loss) = Total Revenues – Total Expenses
= $2,600 – [$2,400 + $700 + $3,000]
= $2,600 – $6,100
= ($3,500)

E3-19, cont.

Net income (loss) under accrual basis is $2,250.

Calculations:

Net Income (Loss)	=	Total Revenues – Total Expenses
	=	[$2,600 + $2,800] – [$700 + $800 + $1,600 + $50]
	=	$5,400 – $3,150
	=	$2,250

Requirement 3

Accrual basis accounting gives the best picture of the true earnings of Chef's Catering, because revenues are recorded when the company satisfies each performance obligation and expenses are recorded when incurred, as dictated by the revenue recognition principle and the matching principle.

E3-20

Missing values shown in *italics*.

	Situation			
	A	B	C	D
Beginning Prepaid Rent	$ 1,400	$ 1,000	$ 200	$ 700
Payments for Prepaid Rent during the year	700	(*b*) *600*	1,800	(*f*) *900*
Total amount to account for	2,100	1,600	(*c*) *2,000*	(*e*) *1,600*
Subtract: Ending Prepaid Rent	800	700	(*d*) *100*	600
Rent Expense	(*a*) $ *1,300*	$ 900	$ 1,900	$ 1,000

E3-20, cont.

*Calculations:

a:

$\$1{,}300 = \$2{,}100 - \$800$

b:

$\$600 = \$1{,}600 - \$1{,}000$

c:

$\$2{,}000 = \$200 + \$1{,}800$

d:

$\$100 = \$2{,}000 - \$1{,}900$

e:

$\$1{,}600 = \$600 + \$1{,}000$

f:

$\$900 = \$1{,}600 - \$700$

E3-21

Date	Accounts and Explanation	Debit	Credit
Jan. 31 (a)	Unearned Revenue	320*	
	Service Revenue		320*
	To record service revenue earned that was collected in advance.		

* Calculations:

$3,200	Collected in advance on January 1 for 10 months
÷ 10	Months
$ 320	Revenue earned during January

E3-21, cont.

Date	Accounts and Explanation	Debit	Credit
Jan. 31 (b)	Salaries Expense Salaries Payable *To accrue salaries expense.*	1,800*	 1,800*

* Calculations:

$3,600	Salaries expense per month
÷ 2	
$1,800	Salaries expense for the second half of January

Date	Accounts and Explanation	Debit	Credit
Jan. 31 (c)	Accounts Receivable Service Revenue *To accrue service revenue.*	1,600	 1,600

Date	Accounts and Explanation	Debit	Credit
Jan. 31 (d)	Interest Expense Interest Payable *To accrue interest expense.*	53	 53

E3-22

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Unearned Revenue Rent Revenue *To record rent revenue earned that was collected in advance.*	750*	 750*
b. Dec. 31	Salaries Expense Salaries Payable *To accrue salaries expense.*	7,200*	 7,200*
c. Dec. 31	Supplies Expense Office Supplies *To record office supplies used.*	1,100*	 1,100*

E3-22, cont.

d. Dec. 31	Depreciation Expense—Equipment	500	
	Accumulated Depreciation—Equipment		500
	To record depreciation on equipment.		
e. Dec. 31	Insurance Expense	1,620*	
	Prepaid Insurance		1,620*
	To record insurance expense.		

* Calculations:

Situation a:

$3,000	Rent collected in advance on October 1 for 1 year
÷ 12	Months
$ 250	Rent revenue earned per month

Thus,

$ 250	Rent revenue earned per month
× 3	Months
$750	Rent revenue earned during October through December

Situation b:

$1,800	Salaries expense per day
× 4	Days
$7,200	Salaries expense for Monday through Thursday

Situation c:

$ 3,000	Office supplies prior to adjustment
(1,900)	Office supplies on hand
$ 1,100	Supplies expense (cost of office supplies used)

E3-22, cont.

Situation e:

$4,320	Insurance prepaid on April 1 for 2 years
÷ 24	Months
$ 180	Insurance expense per month

Thus,

$ 180	Insurance expense per month
× 9	Months
$1,620	Insurance expense for April through December

E3-23

Date	Accounts and Explanation	Debit	Credit
a.	Depreciation Expense—Equipment	2,100	
	Accumulated Depreciation—Equipment		2,100
	To record depreciation on equipment.		
b.	Salaries Expense	800*	
	Salaries Payable		800*
	To accrue salaries expense.		
c.	Supplies Expense	4,300*	
	Office Supplies		4,300*
	To record office supplies used.		
d.	Insurance Expense	1,500*	
	Prepaid Insurance		1,500*
	To record insurance expense.		
e.	Unearned Revenue	2,800	
	Service Revenue		2,800
	To record service revenue earned that was collected in advance.		
f.	Interest Expense	200	
	Interest Payable		200
	To accrue interest expense.		

E3-23, cont.

g.	Accounts Receivable Service Revenue *To accrue service revenue.*	3,000	 3,000

* Calculations:

Situation b:

$1,400	Payroll for a 7-day work week
÷ 7	work days
$ 200	Salaries expense per work day

Thus,

$ 200	Salaries expense per work day
× 4	work days
$800	Salaries expense for Monday through Thursday

Situation c:

$ 2,300	Beginning balance of office supplies
3,000	Office supplies purchased
(1,000)	Office supplies on hand
$ 4,300	Supplies expense (cost of office supplies used)

Situation d:

$6,000	Insurance for two years
÷ 24	Months
$ 250	Insurance expense per month

Thus,

$ 250	Insurance expense per month
× 6	Months
$1,500	Insurance expense for July through December

E3-24
Requirement 1

Accounts Receivable			
Bal.	1,500		

Salaries Payable			
		0	Bal.

Service Revenue			
		4,100	Bal.

Office Supplies			
Bal.	700		

Unearned Revenue			
		900	Bal.

Salaries Expense			
Bal.	800		

Prepaid Rent			
Bal.	2,240		

Supplies Expense			
Bal.	0		

Equipment			
Bal.	8,000		

Rent Expense			
Bal.	0		

Accumulated Depreciation—Equipment			
		0	Bal.

Depreciation Expense—Equipment			
Bal.	0		

E3-24, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Mar. 31	Accounts Receivable	700	
	Service Revenue		700
	To accrue service revenue.		
b. Mar. 31	Unearned Revenue	100	
	Service Revenue		100
	To record service revenue earned that was collected in advance.		
c. Mar. 31	Supplies Expense	400*	
	Office Supplies		400*
	To record office supplies used.		
d. Mar. 31	Salaries Expense	200	
	Salaries Payable		200
	To accrue salaries expense.		
e. Mar. 31	Rent Expense	560	
	Prepaid Rent		560
	To record rent expense.		
f. Mar. 31	Depreciation Expense—Equipment	120	
	Accumulated Depreciation—Equipment		120
	To record depreciation on equipment.		

* Calculations:

$ 700	Office supplies prior to adjustment
(300)	Office supplies on hand
$ 400	Supplies expense (cost of office supplies used)

E3-24, cont.
Requirement 3

Accounts Receivable

Bal.	1,500		
a.	700		
Bal.	2,200		

Salaries Payable

		0	Bal.
		200	d.
		200	Bal.

Service Revenue

		4,100	Bal.
		700	a.
		100	b.
		4,900	Bal.

Office Supplies

Bal.	700	400	c.
Bal.	300		

Unearned Revenue

b.	100	900	Bal.
		800	Bal.

Salaries Expense

Bal.	800		
d.	200		
Bal.	1,000		

Prepaid Rent

Bal.	2,240	560	e.
Bal.	1,680		

Supplies Expense

Bal.	0		
c.	400		
Bal.	400		

Equipment

Bal.	8,000		
Bal.	8,000		

Rent Expense

Bal.	0		
e.	560		
Bal.	560		

Accumulated Depreciation—Equipment

		0	Bal.
		120	f.
		120	Bal.

Depreciation Expense—Equipment

Bal.	0		
f.	120		
Bal.	120		

E3-25
Requirement 1

Cash	
Bal. 800	

Accounts Payable	
	2,400 Bal.

Service Revenue	
	25,000 Bal.

Office Supplies	
Bal. 2,000	

Salaries Payable	

Salaries Expense	
Bal. 7,000	

Prepaid Insurance	
Bal. 600	

Unearned Revenue	
	700 Bal.

Supplies Expense	

Equipment	
Bal. 30,000	

Common Stock	
	15,300 Bal.

Depreciation Expense—Equipment	

Accumulated Depreciation—Equipment	
	2,000 Bal.

Dividends	
Bal. 5,000	

Insurance Expense	

E3-25, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Supplies Expense	1,700	
	Office Supplies		1,700
	To record office supplies used.		
b. Dec. 31	Insurance Expense	580	
	Prepaid Insurance		580
	To record insurance expense.		
c. Dec. 31	Depreciation Expense—Equipment	500	
	Accumulated Depreciation—Equipment		500
	To record depreciation on equipment.		
d. Dec. 31	Salaries Expense	310	
	Salaries Payable		310
	To accrue salaries expense.		
e. Dec. 31	Unearned Revenue	400	
	Service Revenue		400
	To record service revenue earned that was collected in advance.		

E3-25, cont.
Requirement 3

Cash

Bal.	800		
Bal.	800		

Accounts Payable

		2,400	Bal.
		2,400	Bal.

Service Revenue

		25,000	Bal.
		400	e.
		25,400	Bal

Office Supplies

Bal.	2,000	1,700	a.
Bal.	300		

Salaries Payable

		310	d.
		310	Bal.

Salaries Expense

Bal.	7,000		
d.	310		
Bal.	7,310		

Prepaid Insurance

Bal.	600	580	b.
Bal.	20		

Unearned Revenue

e.	400	700	Bal.
		300	Bal.

Supplies Expense

a.	1,700		
Bal.	1,700		

Equipment

Bal.	30,000		
Bal.	30,000		

Common Stock

		15,300	Bal.
		15,300	Bal.

Depreciation Expense—Equipment

c.	500		
Bal.	500		

Accumulated Depreciation—Equipment

		2,000	Bal.
		500	c.
		2,500	Bal.

Dividends

Bal.	5,000		
Bal.	5,000		

Insurance Expense

b.	580		
Bal.	580		

E3-26

ALL MOPPED UP COMPANY Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 800	
Office Supplies	300	
Prepaid Insurance	20	
Equipment	30,000	
Accumulated Depreciation—Equipment		$ 2,500
Accounts Payable		2,400
Salaries Payable		310
Unearned Revenue		300
Common Stock		15,300
Dividends	5,000	
Service Revenue		25,400
Salaries Expense	7,310	
Supplies Expense	1,700	
Depreciation Expense—Equipment	500	
Insurance Expense	580	
Total	$ 46,210	$ 46,210

E3-27

Item	Adjusting Entry Needed?	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
a.	*Yes*	*Liability* *Equity*	*Over* *Under*	*Revenue*	*Under*
b.	Yes	Liability Equity	Under Over	Expense	Under
c.	Yes	Asset Equity	Over Over	Expense	Under
d.	Yes	Asset Equity	Over Over	Expense	Under
e.	Yes	Asset Equity	Over Over	Expense	Under
f.	Yes	Liability Equity	Under Over	Expense	Under
g.	Yes	Asset Equity	Under Under	Expense	Over

E3-28
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Jul. 31	Depreciation Expense	600	
	Accumulated Depreciation		600
	To record depreciation.		
b. Jul. 31	Rent Expense	200	
	Prepaid Rent		200
	To record rent expense.		
c. Jul. 31	Interest Expense	700	
	Interest Payable		700
	To accrue interest expense.		
d. Jul. 31	Salaries Expense	6,400*	
	Salaries Payable		6,400*
	To accrue salaries expense.		
e. Jul. 31	Unearned Revenue	1,000	
	Service Revenue		1,000
	To record service revenue earned that was collected in advance.		
f. Jul. 31	Supplies Expense	150	
	Office Supplies		150
	To record office supplies used.		

* Calculations:

$8,000	Payroll for a 5-day work week
÷ 5	work days
$ 1,600	Salaries expense per work day

Thus,

$ 1,600	Salaries expense per work day
× 4	work days
$6,400	Salaries expense for Monday through Thursday

E3-28, cont.
Requirement 2

If the adjustments in Requirement 1 were not made, net income would be overstated by $7,050 overall.

Calculations:

Adjustment	If Not Made: Net Income Overstated (Understated)
a.	$ 600
b.	200
c.	700
d.	6,400
e.	(1,000)
f.	150
Overall	$ 7,050

E3-29
Requirements 1 and 2

BEST JOBS EMPLOYMENT SERVICES Worksheet April 30, 2018									
Account Names	Unadjusted Trial Balance		Adjustments					Adjusted Trial Balance	
	Debit	Credit		Debit	Credit			Debit	Credit
Cash	$ 1,100							$ 1,100	
Accounts Receivable	4,100		a.	$ 700				4,800	
Office Supplies	1,200				$ 300	b.		900	
Equipment	32,700							32,700	
Accumulated Depreciation—Equipment		$ 13,900			1,300	c.			$ 15,200
Salaries Payable					1,400	d.			1,400
Common Stock		25,200							25,200
Dividends	5,300							5,300	
Service Revenue		9,000			700	a.			9,700
Salaries Expense	2,200		d.	1,400				3,600	
Rent Expense	1,500							1,500	
Depreciation Expense—Equipment			c.	1,300				1,300	
Supplies Expense			b.	300				300	
Total	$ 48,100	$ 48,100		$ 3,700	$ 3,700			$ 51,500	$ 51,500

E3-29, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
a. Apr. 30	Accounts Receivable	700	
	Service Revenue		700
	To accrue service revenue.		
b. Apr. 30	Supplies Expense	300	
	Office Supplies		300
	To record office supplies used.		
c. Apr. 30	Depreciation Expense—Equipment	1,300	
	Accumulated Depreciation—Equipment		1,300
	To record depreciation on equipment.		
d. Apr. 30	Salaries Expense	1,400	
	Salaries Payable		1,400
	To accrue salaries expense.		

E3-30
Requirement 1

MACEY'S LANDSCAPING SERVICES Worksheet December 31, 2018						
Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 27,400				$ 27,400	
Accounts Receivable	6,700		h. $ 3,500		10,200	
Office Supplies	500			$ 350 b.	150	
Prepaid Rent	2,300			1,150 a.	1,150	
Equipment	50,000				50,000	
Accumulated Depreciation—Equipment				1,300 c.		$ 1,300
Trucks	114,000				114,000	
Accumulated Depreciation—Trucks				1,900 d.		1,900
Accounts Payable		$ 3,800				3,800
Utilities Payable		300				300
Salaries Payable				7,200 f.		7,200
Interest Payable				300 g.		300
Unearned Revenue		4,500	e. 3,200			1,300
Notes Payable		25,000				25,000
Common Stock		141,900				141,900
Dividends	21,000				21,000	
Service Revenue		84,000		6,700 e., h.		90,700
Rent Expense	9,200		a. 1,150		10,350	
Salaries Expense	23,800		f. 7,200		31,000	
Supplies Expense			b. 350		350	
Utilities Expense	4,600				4,600	
Depreciation Expense – Equipment			c. 1,300		1,300	
Depreciation Expense – Trucks			d. 1,900		1,900	
Interest Expense			g. 300		300	
Total	$ 259,500	$ 259,500	$ 18,900	$ 18,900	$ 273,700	$ 273,700

E3-30, cont.
Requirement 2

a. Prepaid rent expired, $1,150
b. Office supplies used, $350
c. Depreciation on equipment, $1,300
d. Depreciation on trucks, $1,900
e. Unearned revenue earned, $3,200
f. Salaries owed to employees, $7,200
g. Interest expense accrued, $300
h. Service revenue accrued, $3,500

E3A-31
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Supplies Expense	4,400*	
	Office Supplies		4,400*
	To record office supplies used.		

* Calculations:

$ 1,200	Beginning balance of office supplies
4,000	Office supplies purchased
(800)	Office supplies on hand
$ 4,400	Supplies expense (cost of office supplies used)

Office Supplies

Bal.	1,200	4,400 Adj.
	4,000	
Bal.	800	

Supplies Expense

Adj.	4,400	
Bal.	4,400	

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Supplies Expense	400	
	Office Supplies		400
	To record additional supplies expense.		

Office Supplies

Bal.	1,200	400 Adj.
Bal.	800	

Supplies Expense

	4,000	
Adj.	400	
Bal.	4,400	

E3A-31, cont.
Requirement 3

The ending balances in the Office Supplies account and the Supplies Expense account are the same, regardless of which of the two approaches is used.

E3A-32
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Unearned Revenue	5,100*	
	Service Revenue		5,100*
	To record service revenue earned that was collected in advance.		

* Calculations:

$ 2,100	Unearned Revenue at the beginning of the year
6,100	Cash collected for future services
(3,100)	Unearned Revenue still unearned
$ 5,100	Service Revenue earned

Unearned Revenue			
Adj.	5,100	2,100	Bal.
		6,100	
		3,100	Bal.

Service Revenue			
		20,000	
		5,100	Adj.
		25,100	Bal.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Service Revenue	1,000*	
	Unearned Revenue		1,000*
	To record additional unearned revenue.		

* Calculations:

$ 3,100	Unearned Revenue still unearned
(2,100)	Unearned Revenue prior to adjustment
$ 1,000	Additional Unearned Revenue to be recorded

Unearned Revenue			
		2,100	Bal.
		1,000	Adj.
		3,100	Bal.

Service Revenue			
		20,000	
Adj.	1,000	6,100	
		25,100	Bal.

E3A-32, cont.
Requirement 3

The ending balances in the Unearned Revenue account and the Service Revenue account are the same, regardless of which of the two approaches is used.

Problems (Group A)

P3-33A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Salaries Expense	3,200*	
	Salaries Payable		3,200*
	To accrue salaries expense.		
b. Dec. 31	Insurance Expense	4,000*	
	Prepaid Insurance		4,000*
	To record insurance expense.		
c. Dec. 31	Supplies Expense	8,400*	
	Office Supplies		8,400*
	To record office supplies used.		
d. Dec. 31	Unearned Revenue	2,600*	
	Service Revenue		2,600*
	To record service revenue earned that was collected in advance.		
e. Dec. 31	Accounts Receivable	3,000	
	Service Revenue		3,000
	To accrue service revenue.		
f. Dec. 31	Depreciation Expense—Equipment	3,000	
	Depreciation Expense—Trucks	2,200	
	Accumulated Depreciation—Equipment		3,000
	Accumulated Depreciation—Trucks		2,200
	To record depreciation on equipment and trucks.		
g. Dec. 31	Interest Expense	250	
	Interest Payable		250
	To accrue interest expense.		

P3-33A, cont.

* Calculations:

a:

$8,000	Payroll for a 5-day work week
÷ 5	work days
$1,600	Salaries expense per work day

Thus,

$1,600	Salaries expense per work day
× 2	work days
$3,200	Salaries expense for Monday through Tuesday

b:

$8,000	Insurance prepaid on January 1 for two years
÷ 2	Years
$4,000	Insurance expense for one year

c:

$4,300	Beginning balance of office supplies
5,600	Office supplies purchased
(1,500)	Office supplies on hand
$8,400	Supplies expense (cost of office supplies used)

d:

$6,500	Collected in advance during December
× 40%	Percentage earned during December
$2,600	Revenue earned during December

P3-33A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Jan. 3	Salaries Expense	4,800*	
	Salaries Payable	3,200	
	Cash		8,000
	To record payment of salaries.		
d.	Unearned Revenue	3,900*	
	Service Revenue		3,900*
	To record service revenue earned that was collected in advance.		
g. Jan. 15	Interest Expense	300	
	Interest Payable	250	
	Cash		550
	To record payment of interest.		

* Calculations:

a:

\$8,000	Payroll for a 5-day work week
÷ 5	work days
\$1,600	Salaries expense per work day

Thus,

\$1,600	Salaries expense per work day
× 3	work days
\$4,800	Salaries expense for Wednesday through Friday of the current week

d:

\$6,500	Collected in advance during December
(2,600)	Revenue earned during December (see requirement 1)
\$3,900	Revenue earned after December

g:

\$550	Total interest paid on January 15
(250)	Interest expense previously accrued on December 31
\$300	Interest expense for January 1 through January 15

P3-34A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Utilities Expense	375	
	Utilities Payable		375
	To accrue utilities expense.		
b. Dec. 31	Insurance Expense	800*	
	Prepaid Insurance		800*
	To record insurance expense.		
c. Dec. 31	Accounts Receivable	3,000	
	Service Revenue		3,000
	To accrue service revenue.		
d. Dec. 31	Depreciation Expense—Boat	3,000*	
	Accumulated Depreciation—Boat		3,000*
	To record depreciation on boat.		
e. Dec. 31	Unearned Revenue	9,000	
	Service Revenue		9,000
	To record service revenue earned that was collected in advance.		

* Calculations:

b:

$1,200	Insurance prepaid on November 1 for 3 months
÷ 3	months
$ 400	Insurance expense per month

Thus,

$400	Insurance expense per month
× 2	months
$800	Insurance expense for November and December

P3-34A, cont.

d:

$$\text{Straight-line depreciation per year} = (\text{Cost} - \text{Residual Value}) / \text{Useful Life in Years}$$

$$= (\$33{,}500 - \$3{,}500) / 10 \text{ years}$$

$$= \$30{,}000 / 10 \text{ years}$$

$$= \underline{\underline{\$3{,}000}}$$

Requirement 2

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
a.	Liability Equity	Understated Overstated	Expense	Understated
b.	Asset Equity	Overstated Overstated	Expense	Understated
c.	Asset Equity	Understated Understated	Revenue	Understated
d.	Asset Equity	Overstated Overstated	Expense	Understated
e.	Liability Equity	Overstated Understated	Revenue	Understated

P3-35A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Unearned Revenue	2,100	
	Service Revenue		2,100
	To record service revenue earned that was collected in advance.		
b. Dec. 31	Rent Expense	1,450*	
	Prepaid Rent		1,450*
	To record rent expense.		
c. Dec. 31	Supplies Expense	750	
	Office Supplies		750
	To record office supplies used.		
d. Dec. 31	Depreciation Expense—Equipment	850	
	Accumulated Depreciation—Equipment		850
	To record depreciation on equipment.		
e. Dec. 31	Advertising Expense	1,100	
	Accounts Payable		1,100
	To accrue advertising expense.		
f. Dec. 31	Salaries Expense	2,100*	
	Salaries Payable		2,100*
	To accrue salaries expense.		
g. Dec. 31	Accounts Receivable	2,550*	
	Service Revenue		2,550*
	To accrue service revenue.		

P3-35A, cont.

* Calculations:

b:

$2,900	Rent prepaid on December 1 for two months
÷ 2	months
$1,450	Rent Expense for December

f:

$3,500	Payroll for a 5-day work week
÷ 5	work days
$ 700	Salaries Expense per work day

Thus,

$ 700	Salaries Expense per work day
× 3	work days
$2,100	Salaries Expense for Monday through Wednesday

g:

$3,400	Service Revenue to be earned October through January
÷ 4	months
$ 850	Service Revenue earned per month

Thus,

$ 850	Service Revenue earned per month
× 3	months
$2,550	Service Revenue earned October through December

P3-35A, cont.
Requirement 2

Cash

Bal.	7,600		
Bal.	7,600		

Accounts Payable

		2,900	Bal.
		1,100	e.
		4,000	Bal.

Service Revenue

		15,300	Bal.
		2,100	a.
		2,550	g.
		19,950	Bal.

Accounts Receivable

Bal.	19,700		
g.	2,550		
Bal.	22,250		

Salaries Payable

		2,100	f.
		2,100	Bal.

Salaries Expense

Bal.	3,300		
f.	2,100		
Bal.	5,400		

Prepaid Rent

Bal.	2,900	1,450	b.
Bal.	1,450		

Unearned Revenue

a.	2,100	3,100	Bal.
		1,000	Bal.

Rent Expense

b.	1,450		
Bal.	1,450		

Office Supplies

Bal.	1,800	750	c.
Bal.	1,050		

Common Stock

		43,800	Bal.
		43,800	Bal.

Depreciation Expense—Equipment

d.	850		
Bal.	850		

Equipment

Bal.	22,000		
Bal.	22,000		

Dividends

Bal.	9,900		
Bal.	9,900		

Advertising Expense

Bal.	1,800		
e.	1,100		
Bal.	2,900		

Accumulated Depreciation—Equipment

		3,900	Bal.
		850	d.
		4,750	Bal.

Supplies Expense

c.	750		
Bal.	750		

P3-35A, cont.
Requirement 3

ANNISTON AIR PURIFICATION SYSTEM Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 7,600	
Accounts Receivable	22,250	
Prepaid Rent	1,450	
Office Supplies	1,050	
Equipment	22,000	
Accumulated Depreciation—Equipment		$ 4,750
Accounts Payable		4,000
Salaries Payable		2,100
Unearned Revenue		1,000
Common Stock		43,800
Dividends	9,900	
Service Revenue		19,950
Salaries Expense	5,400	
Rent Expense	1,450	
Depreciation Expense—Equipment	850	
Advertising Expense	2,900	
Supplies Expense	750	
Total	$ 75,600	$ 75,600

Requirement 4

Anniston will use the adjusted trial balance to prepare its financial statements. (Additionally, the purpose of any trial balance is to ensure that total debits equal total credits.)

P3-36A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Insurance Expense	3,900*	
	Prepaid Insurance		3,900*
	To record insurance expense.		
b. Dec. 31	Supplies Expense	300*	
	Office Supplies		300*
	To record office supplies used.		
c. Dec. 31	Depreciation Expense—Building	1,200	
	Accumulated Depreciation—Building		1,200
	To record depreciation on building.		
d. Dec. 31	Salaries Expense	1,080*	
	Salaries Payable		1,080*
	To accrue salaries expense.		
e. Dec. 31	Unearned Revenue	2,000*	
	Service Revenue		2,000*
	To record service revenue earned that was collected in advance.		

* Calculations:

a:

$4,600	Prepaid Insurance prior to adjustment
(700)	Prepaid Insurance remaining
$3,900	Insurance Expense

b:

$800	Office Supplies prior to adjustment
(500)	Office Supplies remaining
$300	Supplies Expense (cost of office supplies used)

P3-36A, cont.

d:

$1,800	Salaries for a five-day work week
÷ 5	work days
$ 360	Salaries Expense per work day

Thus,

$ 360	Salaries Expense per work day
× 3	work days
$1,080	Salaries Expense for Monday through Wednesday

e:

$3,600	Unearned Revenue prior to adjustment
(1,600)	Unearned Revenue still unearned
$2,000	Service Revenue earned

Requirement 2

CASH Account No.

					Balance	
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
2018 Dec. 31	Balance				13,500	

ACCOUNTS RECEIVABLE Account No.

					Balance	
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
2018 Dec. 31	Balance				15,100	

PREPAID INSURANCE Account No.

					Balance	
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
2018 Dec. 31	Balance				4,600	
Dec. 31	a.			3,900	700	

P3-36A, cont.

OFFICE SUPPLIES Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance				800	
Dec. 31	b.			300	500	

BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance				530,000	

ACCUMULATED DEPRECIATION—BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance					260,000
Dec. 31	c.			1,200		261,200

ACCOUNTS PAYABLE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance					1,710

SALARIES PAYABLE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	d.			1,080		1,080

UNEARNED REVENUE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance					3,600
Dec. 31	e.		2,000			1,600

P3-36A, cont.

COMMON STOCK Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance					288,950

DIVIDENDS Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance				2,340	

SERVICE REVENUE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance					15,500
Dec. 31	e.			2,000		17,500

SALARIES EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance				2,800	
Dec. 31	d.		1,080		3,880	

INSURANCE EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	a.		3,900		3,900	

DEPRECIATION EXPENSE—BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	c.		1,200		1,200	

P3-36A, cont.

ADVERTISING EXPENSE | Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018 Dec. 31	Balance				620	

SUPPLIES EXPENSE | Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018 Dec. 31	b.		300		300	

Requirement 3

GUTHRIE INN COMPANY
Adjusted Trial Balance
December 31, 2018

Account Title	Balance Debit	Balance Credit
Cash	$ 13,500	
Accounts Receivable	15,100	
Prepaid Insurance	700	
Office Supplies	500	
Building	530,000	
Accumulated Depreciation—Building		$ 261,200
Accounts Payable		1,710
Salaries Payable		1,080
Unearned Revenue		1,600
Common Stock		288,950
Dividends	2,340	
Service Revenue		17,500
Salaries Expense	3,880	
Insurance Expense	3,900	
Depreciation Expense—Building	1,200	
Advertising Expense	620	
Supplies Expense	300	
Total	$ 572,040	$ 572,040

P3-36A, cont.
Requirement 4

No. Even if total debits equals total credits on the adjusted trial balance, this does not mean that the adjusting entries have been recorded correctly. For example, an adjusting entry could have been recorded for the incorrect amount (even though the debit and the credit amount is the same, the amount is incorrect). Or an adjusting entry could have been omitted entirely.

P3-37A
Requirement 1

GREAVY THEATER PRODUCTION COMPANY
Worksheet
December 31, 2018

Account	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 4,300				$ 4,300	
Accounts Receivable	5,900		a. $ 500		6,400	
Office Supplies	1,900			$ 1,200 b.	700	
Prepaid Insurance	4,550			650 c.	3,900	
Equipment	30,000				30,000	
Accumulated Depreciation—Equipment		$ 7,600		4,000 d.		$ 11,600
Accounts Payable		3,600				3,600
Salaries Payable				200 e.		200
Common Stock		21,950				21,950
Dividends	30,500				30,500	
Service Revenue		77,000		500 a.		77,500
Depreciation Expense—Equipment			d. 4,000		4,000	
Supplies Expense			b. 1,200		1,200	
Utilities Expense	5,500				5,500	
Salaries Expense	27,500		e. 200		27,700	
Insurance Expense			c. 650		650	
Total	$ 110,150	$ 110,150	$ 6,550	$ 6,550	$ 114,850	$ 114,850

P3-37A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Accounts Receivable	500	
	Service Revenue		500
	To accrue service revenue.		
b. Dec. 31	Supplies Expense	1,200	
	Office Supplies		1,200
	To record office supplies used.		
c. Dec. 31	Insurance Expense	650	
	Prepaid Insurance		650
	To record insurance expense.		
d. Dec. 31	Depreciation Expense—Equipment	4,000	
	Accumulated Depreciation—Equipment		4,000
	To record depreciation on equipment.		
e. Dec. 31	Salaries Expense	200	
	Salaries Payable		200
	To accrue salaries expense.		

P3A-38A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Prepaid Rent	9,600	
	Cash		9,600
	To record rent paid in advance.		
Nov. 1	Prepaid Insurance	6,000	
	Cash		6,000
	To record insurance paid in advance.		
Dec. 1	Cash	9,000	
	Unearned Revenue		9,000
	To record cash collected for future services.		
Dec. 1	Cash	7,200	
	Unearned Revenue		7,200
	To record cash collected for future services.		

P3A–38A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Rent Expense	3,200*	
	Prepaid Rent		3,200*
	To record rent expense.		
Dec. 31	Insurance Expense	2,400*	
	Prepaid Insurance		2,400*
	To record insurance expense.		
Dec. 31	Unearned Revenue	1,800	
	Service Revenue		1,800
	To record service revenue earned that was collected in advance.		
Dec. 31	Unearned Revenue	2,400	
	Service Revenue		2,400
	To record service revenue earned that was collected in advance.		

* Calculations:

Adjusting Journal Entry One:

$9,600	Rent prepaid on November 1 for 6 months
÷ 6	months
$1,600	Rent expense per month

Thus,

$1,600	Rent expense per month
× 2	months
$3,200	Rent expense for November and December

P3A–38A, cont.

Adjusting Journal Entry Two:

$6,000	Insurance prepaid on November 1 for 5 months
÷ 5	Months
$1,200	Insurance expense per month

Thus,

$1,200	Insurance expense per month
× 2	Months
$2,400	Insurance expense for November and December

Requirement 3

Prepaid Rent

Nov. 1	9,600	3,200	Dec. 31
Bal.	6,400		

Rent Expense

Dec. 31	3,200		
Bal.	3,200		

Prepaid Insurance

Nov. 1	6,000	2,400	Dec. 31
Bal.	3,600		

Insurance Expense

Dec. 31	2,400		
Bal.	2,400		

Unearned Revenue

Dec. 31	1,800	9,000	Dec. 1
Dec. 31	2,400	7,200	Dec. 1
		12,000	Bal.

Service Revenue

		1,800	Dec. 31
		2,400	Dec. 31
		4,200	Bal.

P3A-38A, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Rent Expense	9,600	
	Cash		9,600
	To record rent paid in advance.		
Nov. 1	Insurance Expense	6,000	
	Cash		6,000
	To record insurance paid in advance.		
Dec. 1	Cash	9,000	
	Service Revenue		9,000
	To record cash collected for future services.		
Dec. 1	Cash	7,200	
	Service Revenue		7,200
	To record cash collected for future services.		
Dec. 31	Prepaid Rent	6,400*	
	Rent Expense		6,400*
	To record prepaid rent.		
Dec. 31	Prepaid Insurance	3,600*	
	Insurance Expense		3,600*
	To record prepaid insurance.		
Dec. 31	Service Revenue	7,200*	
	Unearned Revenue		7,200*
	To record unearned revenue.		
Dec. 31	Service Revenue	4,800*	
	Unearned Revenue		4,800*
	To record unearned revenue.		

P3A–38A, cont.

* Calculations:

Adjusting Journal Entry One:

$9,600	Rent prepaid on November 1 for 6 months
÷ 6	Months
$1,600	Rent expense per month

Thus,

$1,600	Rent expense per month
× 4	Months
$6,400	Rent still prepaid on December 31

Adjusting Journal Entry Two:

$6,000	Insurance prepaid on November 1 for 5 months
÷ 5	Months
$1,200	Insurance expense per month

Thus,

$1,200	Insurance expense per month
× 3	Months
$3,600	Insurance still prepaid on December 31

Adjusting Journal Entry Three:

$ 9,000	Collected in advance on December 1 for 5 months
(1,800)	Revenue earned during December
$ 7,200	Revenue still unearned on December 31

Adjusting Journal Entry Four:

$ 7,200	Collected in advance on December 1 for 3 months
(2,400)	Revenue earned during December
$ 4,800	Revenue still unearned on December 31

P3A–38A, cont.

Prepaid Rent

	Debit	Credit	
Dec. 31	6,400		
Bal.	6,400		

Rent Expense

	Debit	Credit	
Nov. 1	9,600	6,400	Dec. 31
Bal.	3,200		

Prepaid Insurance

	Debit	Credit	
Dec. 31	3,600		
Bal.	3,600		

Insurance Expense

	Debit	Credit	
Nov. 1	6,000	3,600	Dec. 31
Bal.	2,400		

Unearned Revenue

	Debit	Credit	
		7,200	Dec. 31
		4,800	Dec. 31
		12,000	Bal.

Service Revenue

	Debit	Credit	
Dec. 31	7,200	9,000	Dec. 1
Dec. 31	4,800	7,200	Dec. 1
		4,200	Bal.

Requirement 5

The ending balances in the accounts are the same, regardless of which of the two approaches is used.

Problems (Group B)

P3-39B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Salaries Expense	3,900*	
	Salaries Payable		3,900*
	To accrue salaries expense.		
b. Dec. 31	Insurance Expense	3,750*	
	Prepaid Insurance		3,750*
	To record insurance expense.		
c. Dec. 31	Supplies Expense	6,500*	
	Office Supplies		6,500*
	To record office supplies used.		
d. Dec. 31	Unearned Revenue	4,200*	
	Service Revenue		4,200*
	To record service revenue earned that was collected in advance.		
e. Dec. 31	Accounts Receivable	7,500	
	Service Revenue		7,500
	To accrue service revenue.		
f. Dec. 31	Depreciation Expense—Equipment	3,800	
	Depreciation Expense—Trucks	1,400	
	Accumulated Depreciation—Equipment		3,800
	Accumulated Depreciation—Trucks		1,400
	To record depreciation on equipment and trucks.		
g. Dec. 31	Interest Expense	250	
	Interest Payable		250
	To accrue interest expense.		

P3-39B, cont.

* Calculations:

a:

$6,500	Payroll for a 5-day work week
÷ 5	work days
$1,300	Salaries expense per work day

Thus,

$1,300	Salaries expense per work day
× 3	work days
$3,900	Salaries expense for Monday through Wednesday

b:

$7,500	Insurance prepaid on January 1 for two years
÷ 2	years
$3,750	Insurance expense for one year

c:

$3,700	Beginning balance of office supplies
5,800	Office supplies purchased
(3,000)	Office supplies on hand
$6,500	Supplies expense (cost of office supplies used)

d:

$6,000	Collected in advance during December
× 70%	Percentage earned during December
$4,200	Revenue earned during December

P3-39B, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Jan. 2	Salaries Expense	2,600*	
	Salaries Payable	3,900	
	Cash		6,500
	To record payment of salaries.		
d.	Unearned Revenue	1,800*	
	Service Revenue		1,800*
	To record service revenue earned that was collected in advance.		
g. Jan. 15	Interest Expense	100*	
	Interest Payable	250	
	Cash		350
	To record payment of interest.		

* Calculations:

a:

$6,500	Payroll for a 5-day work week
÷ 5	work days
$1,300	Salaries expense per work day

Thus,

$1,300	Salaries expense per work day
× 2	work days
$2,600	Salaries expense for Thursday and Friday of the current week

d:

$6,000	Collected in advance during December
(4,200)	Revenue earned during December (see requirement 1)
$1,800	Revenue earned after December

g:

$350	Total interest paid on January 15
(250)	Interest expense previously accrued on December 31
$100	Interest expense for January 1 through January 15

P3-40B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Utilities Expense	375	
	Utilities Payable		375
	To accrue utilities expense.		
b. Dec. 31	Insurance Expense	2,400*	
	Prepaid Insurance		2,400*
	To record insurance expense.		
c. Dec. 31	Accounts Receivable	1,000	
	Service Revenue		1,000
	To accrue service revenue.		
d. Dec. 31	Depreciation Expense—Boat	10,000*	
	Accumulated Depreciation—Boat		10,000*
	To record depreciation on boat.		
e. Dec. 31	Unearned Revenue	5,000	
	Service Revenue		5,000
	To record service revenue earned that was collected in advance.		

* Calculations:

b:

$3,600	Insurance prepaid on November 1 for 3 months
÷ 3	months
$1,200	Insurance expense per month

Thus,

$1,200	Insurance expense per month
× 2	months
$2,400	Insurance expense for November and December

P3-40B, cont.

d:

$$\text{Straight-line depreciation per year} = (\text{Cost} - \text{Residual Value}) / \text{Useful Life in Years}$$

$$= (\$56{,}500 - \$6{,}500) / 5 \text{ years}$$

$$= \$50{,}000 / 5 \text{ years}$$

$$= \underline{\underline{\$10{,}000}}$$

Requirement 2

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
a.	Liability Equity	Understated Overstated	Expense	Understated
b.	Asset Equity	Overstated Overstated	Expense	Understated
c.	Asset Equity	Understated Understated	Revenue	Understated
d.	Asset Equity	Overstated Overstated	Expense	Understated
e.	Liability Equity	Overstated Understated	Revenue	Understated

P3-41B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Unearned Revenue	2,100	
	Service Revenue		2,100
	To record service revenue earned that was collected in advance.		
b. Dec. 31	Rent Expense	1,200*	
	Prepaid Rent		1,200*
	To record rent expense.		
c. Dec. 31	Supplies Expense	750	
	Office Supplies		750
	To record office supplies used.		
d. Dec. 31	Depreciation Expense—Equipment	800	
	Accumulated Depreciation—Equipment		800
	To record depreciation on equipment.		
e. Dec. 31	Advertising Expense	500	
	Accounts Payable		500
	To accrue advertising expense.		
f. Dec. 31	Salaries Expense	1,200*	
	Salaries Payable		1,200*
	To accrue salaries expense.		
g. Dec. 31	Accounts Receivable	2,100*	
	Service Revenue		2,100*
	To accrue service revenue.		

* Calculations:

b:

$2,400	Rent prepaid on December 1 for two months
÷ 2	months
$1,200	Rent expense for December

P3-41B, cont.

f:

$2,000	Payroll for a 5-day work week
÷ 5	work days
$ 400	Salaries expense per work day

Thus,

$ 400	Salaries expense per work day
× 3	work days
$1,200	Salaries expense for Monday through Wednesday

g:

$2,800	Service revenue to be earned October through January
÷ 4	months
$ 700	Service revenue earned per month

Thus,

$ 700	Service revenue earned per month
× 3	months
$2,100	Service revenue earned October through December

P3-41B, cont.
Requirement 2

Cash

	Debit	Credit	
Bal.	7,100		
Bal.	7,100		

Accounts Payable

	Debit	Credit	
		3,500	Bal.
		500	e.
		4,000	Bal.

Service Revenue

	Debit	Credit	
		15,900	Bal.
		2,100	a.
		2,100	g.
		20,100	Bal.

Accounts Receivable

	Debit	Credit	
Bal.	19,100		
g.	2,100		
Bal.	21,200		

Salaries Payable

	Debit	Credit	
		1,200	f.
		1,200	Bal.

Salaries Expense

	Debit	Credit	
Bal.	3,900		
f.	1,200		
Bal.	5,100		

Prepaid Rent

	Debit	Credit	
Bal.	2,400	1,200	b.
Bal.	1,200		

Unearned Revenue

	Debit	Credit	
a.	2,100	2,700	Bal.
		600	Bal.

Rent Expense

	Debit	Credit	
b.	1,200		
Bal.	1,200		

Office Supplies

	Debit	Credit	
Bal.	1,400	750	c.
Bal.	650		

Common Stock

	Debit	Credit	
		39,300	Bal.
		39,300	Bal.

Depreciation Expense—Equipment

	Debit	Credit	
d.	800		
Bal.	800		

Equipment

	Debit	Credit	
Bal.	20,000		
Bal.	20,000		

Dividends

	Debit	Credit	
Bal.	9,400		
Bal.	9,400		

Advertising Expense

	Debit	Credit	
Bal.	1,900		
e.	500		
Bal.	2,400		

Accumulated Depreciation—Equipment

	Debit	Credit	
		3,800	Bal.
		800	d.
		4,600	Bal.

Supplies Expense

	Debit	Credit	
c.	750		
Bal.	750		

P3-41B, cont.
Requirement 3

AVERY AIR PURIFICATION SYSTEM Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 7,100	
Accounts Receivable	21,200	
Prepaid Rent	1,200	
Office Supplies	650	
Equipment	20,000	
Accumulated Depreciation—Equipment		$ 4,600
Accounts Payable		4,000
Salaries Payable		1,200
Unearned Revenue		600
Common Stock		39,300
Dividends	9,400	
Service Revenue		20,100
Salaries Expense	5,100	
Rent Expense	1,200	
Depreciation Expense—Equipment	800	
Advertising Expense	2,400	
Supplies Expense	750	
Total	$ 69,800	$ 69,800

Requirement 4

Avery will use the adjusted trial balance to prepare its financial statements. (Additionally, the purpose of any trial balance is to ensure that total debits equal total credits.)

P3-42B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Insurance Expense	600*	
	Prepaid Insurance		600*
	To record insurance expense.		
b. Dec. 31	Supplies Expense	200*	
	Office Supplies		200*
	To record office supplies used.		
c. Dec. 31	Depreciation Expense—Building	2,100	
	Accumulated Depreciation—Building		2,100
	To record depreciation on building.		
d. Dec. 31	Salaries Expense	780*	
	Salaries Payable		780*
	To accrue salaries expense.		
e. Dec. 31	Unearned Revenue	200*	
	Service Revenue		200*
	To record service revenue earned that was collected in advance.		

* Calculations:

a:

$1,400	Prepaid Insurance prior to adjustment
(800)	Prepaid Insurance remaining
$ 600	Insurance Expense

b:

$700	Office supplies prior to adjustment
(500)	Office supplies remaining
$200	Supplies Expense (cost of office supplies used)

P3-42B, cont.

d:

$1,300	Salaries for a five-day work week
÷ 5	Work days
$ 260	Salaries Expense per work day

Thus,

$260	Salaries Expense per work day
× 3	work days
$780	Salaries Expense for Monday through Wednesday

e:

$1,600	Unearned Revenue prior to adjustment
(1,400)	Unearned Revenue still unearned
$ 200	Service Revenue earned

Requirement 2

CASH Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018 Dec. 31	Balance				14,500	

ACCOUNTS RECEIVABLE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018 Dec. 31	Balance				15,100	

PREPAID INSURANCE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance Debit	Balance Credit
2018						
Dec. 31	Balance				1,400	
Dec. 31	a.			600	800	

P3-42B, cont.

OFFICE SUPPLIES Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	Balance				700	
Dec. 31	b.			200	500	

BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	Balance				518,000	

ACCUMULATED DEPRECIATION—BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	Balance					310,000
Dec. 31	c.			2,100		312,100

ACCOUNTS PAYABLE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	Balance					4,210

SALARIES PAYABLE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	d.			780		780

UNEARNED REVENUE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Dec. 31	Balance					1,600
Dec. 31	e.		200			1,400

P3-42B, cont.

COMMON STOCK Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	Balance					222,160

DIVIDENDS Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	Balance				1,890	

SERVICE REVENUE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	Balance					16,900
Dec. 31	e.			200		17,100

SALARIES EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	Balance				2,600	
Dec. 31	d.		780		3,380	

INSURANCE EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	a.		600		600	

DEPRECIATION EXPENSE—BUILDING Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	c.		2,100		2,100	

P3-42B, cont.

ADVERTISING EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	Balance				680	

SUPPLIES EXPENSE Account No.

Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018 Dec. 31	b.		200		200	

Requirement 3

MIDWAY INN COMPANY
Adjusted Trial Balance
December 31, 2018

Account Title	Balance	
	Debit	Credit
Cash	$ 14,500	
Accounts Receivable	15,100	
Prepaid Insurance	800	
Office Supplies	500	
Building	518,000	
Accumulated Depreciation—Building		$ 312,100
Accounts Payable		4,210
Salaries Payable		780
Unearned Revenue		1,400
Common Stock		222,160
Dividends	1,890	
Service Revenue		17,100
Salaries Expense	3,380	
Insurance Expense	600	
Depreciation Expense—Building	2,100	
Advertising Expense	680	
Supplies Expense	200	
Total	$ 557,750	$ 557,750

P3-42B, cont.
Requirement 4

No. Even if total debits equals total credits on the adjusted trial balance, this does not mean that the adjusting entries have been recorded correctly. For example, an adjusting entry could have been recorded for the incorrect amount (even though the debit and the credit amount is the same, the amount is incorrect). Or an adjusting entry could have been omitted entirely.

P3-43B
Requirement 1

GALAXY THEATER PRODUCTION COMPANY Worksheet December 31, 2018								
Account	Unadjusted Trial Balance		Adjustments				Adjusted Trial Balance	
	Debit	Credit		Debit	Credit		Debit	Credit
Cash	$ 3,600						$ 3,600	
Accounts Receivable	5,700		a.	$ 900			6,600	
Office Supplies	1,500				$ 1,000	b.	500	
Prepaid Insurance	900				300	c.	600	
Equipment	23,000						23,000	
Accumulated Depreciation—Equipment		$ 8,500			4,200	d.		$ 12,700
Accounts Payable		4,600						4,600
Salaries Payable					150	e.		150
Common Stock		9,900						9,900
Dividends	26,000						26,000	
Service Revenue		72,000			900	a.		72,900
Depreciation Expense—Equipment			d.	4,200			4,200	
Supplies Expense			b.	1,000			1,000	
Utilities Expense	4,300						4,300	
Salaries Expense	30,000		e.	150			30,150	
Insurance Expense			c.	300			300	
Total	$95,000	$95,000		$ 6,550	$ 6,550		$100,250	$100,250

P3-43B, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
a. Dec. 31	Accounts Receivable	900	
	Service Revenue		900
	To accrue service revenue.		
b. Dec. 31	Supplies Expense	1,000	
	Office Supplies		1,000
	To record office supplies used.		
c. Dec. 31	Insurance Expense	300	
	Prepaid Insurance		300
	To record insurance expense.		
d. Dec. 31	Depreciation Expense—Equipment	4,200	
	Accumulated Depreciation—Equipment		4,200
	To record depreciation on equipment.		
e. Dec. 31	Salaries Expense	150	
	Salaries Payable		150
	To accrue salaries expense.		

P3A-44B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Prepaid Rent	6,000	
	Cash		6,000
	To record rent paid in advance.		
Nov. 1	Prepaid Insurance	7,800	
	Cash		7,800
	To record insurance paid in advance.		
Dec. 1	Cash	12,000	
	Unearned Revenue		12,000
	To record cash collected for future services.		
Dec. 1	Cash	7,500	
	Unearned Revenue		7,500
	To record cash collected for future services.		

P3A-44B, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Rent Expense	3,000*	
	Prepaid Rent		3,000*
	To record rent expense.		
Dec. 31	Insurance Expense	2,600*	
	Prepaid Insurance		2,600*
	To record insurance expense.		
Dec. 31	Unearned Revenue	2,400	
	Service Revenue		2,400
	To record service revenue earned that was collected in advance.		
Dec. 31	Unearned Revenue	1,500	
	Service Revenue		1,500
	To record service revenue earned that was collected in advance.		

* Calculations:

Adjusting Journal Entry One:

$6,000	Rent prepaid on November 1 for 4 months
÷ 4	Months
$1,500	Rent expense per month

Thus,

$1,500	Rent expense per month
× 2	Months
$3,000	Rent expense for November and December

Adjusting Journal Entry Two:

$7,800	Insurance prepaid on November 1 for 6 months
÷ 6	Months
$1,300	Insurance expense per month

Thus,

$1,300	Insurance expense per month
× 2	Months
$2,600	Insurance expense for November and December

P3A-44B, cont.
Requirement 3

Prepaid Rent

Nov. 1	6,000	3,000	Dec. 31
Bal.	3,000		

Rent Expense

Dec. 31	3,000		
Bal.	3,000		

Prepaid Insurance

Nov. 1	7,800	2,600	Dec. 31
Bal.	5,200		

Insurance Expense

Dec. 31	2,600		
Bal.	2,600		

Unearned Revenue

Dec. 31	2,400	12,000	Dec. 1
Dec. 31	1,500	7,500	Dec. 1
		15,600	Bal.

Service Revenue

		2,400	Dec. 31
		1,500	Dec. 31
		3,900	Bal.

Requirement 4

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Rent Expense	6,000	
	Cash		6,000
	To record rent paid in advance.		
Nov. 1	Insurance Expense	7,800	
	Cash		7,800
	To record insurance paid in advance.		
Dec. 1	Cash	12,000	
	Service Revenue		12,000
	To record cash collected for future services.		
Dec. 1	Cash	7,500	
	Service Revenue		7,500
	To record cash collected for future services.		

P3A-44B, cont.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Prepaid Rent	3,000*	
	Rent Expense		3,000*
	To record prepaid rent.		
Dec. 31	Prepaid Insurance	5,200*	
	Insurance Expense		5,200*
	To record prepaid insurance.		
Dec. 31	Service Revenue	9,600*	
	Unearned Revenue		9,600*
	To record unearned revenue.		
Dec. 31	Service Revenue	6,000*	
	Unearned Revenue		6,000*
	To record unearned revenue.		

* Calculations:

Adjusting Journal Entry One:

$6,000	Rent prepaid on November 1 for 4 months
÷ 4	Months
$1,500	Rent expense per month

Thus,

$1,500	Rent expense per month
× 2	months
$3,000	Rent still prepaid on December 31

Adjusting Journal Entry Two:

$7,800	Insurance prepaid on November 1 for 6 months
÷ 6	Months
$1,300	Insurance expense per month

Thus,

$1,300	Insurance expense per month
× 4	months
$5,200	Insurance still prepaid on December 31

P3-44B, cont.

Adjusting Journal Entry Three:

$12,000	Collected in advance on December 1 for 5 months
(2,400)	Revenue earned during December
$9,600	Revenue still unearned on December 31

Adjusting Journal Entry Four:

$7,500	Collected in advance on December 1 for 5 months
(1,500)	Revenue earned during December
$6,000	Revenue still unearned on December 31

Prepaid Rent

Dec. 31	3,000		
Bal.	3,000		

Rent Expense

Nov. 1	6,000	3,000	Dec. 31
Bal.	3,000		

Prepaid Insurance

Dec. 31	5,200		
Bal.	5,200		

Insurance Expense

Nov. 1	7,800	5,200	Dec. 31
Bal.	2,600		

Unearned Revenue

		9,600	Dec. 31
		6,000	Dec. 31
		15,600	Bal.

Service Revenue

Dec. 31	9,600	12,000	Dec. 1
Dec. 31	6,000	7,500	Dec. 1
		3,900	Bal.

Requirement 5

The ending balances in the accounts are the same, regardless of which of the two approaches is used.

Using Excel

P3-45

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is located in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P3-46
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Supplies Expense	1,085*	
	Office Supplies		1,085*
	To record supplies used.		
Dec. 31	Rent Expense	1,000*	
	Prepaid Rent		1,000*
	To record rent expense.		
Dec. 31	Depreciation Expense—Building	500*	
	Accumulated Depreciation—Building		500*
	To record depreciation on building.		
Dec. 31	Unearned Revenue	400	
	Canoe Rental Revenue		400
	To record canoe rental revenue earned.		
Dec. 31	Wages Expense	1,250	
	Wages Payable		1,250
	To accrue salaries expense.		
Dec. 31	Accounts Receivable	1,850	
	Canoe Rental Revenue		1,850
	To accrue canoe rental revenue.		
Dec. 31	Depreciation Expense—Canoes	200*	
	Accumulated Depreciation—Canoes		200*
	To record depreciation on canoes.		
Dec. 31	Depreciation Expense—Canoes	150*	
	Accumulated Depreciation—Canoes		150*
	To record depreciation on canoes.		
Dec. 31	Interest Expense	50	
	Interest Payable		50
	To accrue interest expense.		

P3-46, cont.
Requirement 1, cont.

* Calculations:

$1,250	Office Supplies prior to adjustment
(165)	Office Supplies remaining
$1,085	Supplies Expense (cost of supplies used)

$3,000	Rent prepaid on December 1 for 3 months
÷ 3	Months
$1,000	Rent expense per month

Straight-line depreciation per year = (Cost – Residual Value) / Useful Life in Years

= ($35,000 – $5,000) / 5 years

= $30,000 / 5 years

= $6,000 per year / 12 months

= $500 per month

Straight-line depreciation per year = (Cost – Residual Value) / Useful Life in Years

= ($4,800 – $0) / 4 years

= $4,800 / 4 years

= $1,200 / 12 months

= $100 per month × 2 months

= $200 Depreciation expense for November and December

Straight-line depreciation per year = (Cost – Residual Value) / Useful Life in Years

= ($7,200 – $0) / 4 years

= $7,200 / 4 years

= $1,800 per year / 12 months

= $150 per month

P3-46, cont.
Requirement 1

Cash

Nov. 1	16,000	1,200	Nov. 2
Nov. 7	1,400	1,500	Nov. 13
Nov. 28	750	50	Nov. 15
Dec. 9	4,500	1,000	Nov. 26
Dec. 16	750	100	Nov. 30
		3,000	Dec. 1
		325	Dec. 18
		2,000	Dec. 19
		1,800	Dec. 31
		300	Dec. 31
Balance	12,125		

Accounts Payable

Nov. 26	1,000	4,800	Nov. 3
Dec. 19	2,000	750	Nov. 4
		500	Dec. 4
		3,050	Balance

Wages Payable

		1,250	Adj.
		1,250	Balance

Interest Payable

		50	Adj.
		50	Balance

Accounts Receivable

Nov. 22	3,000	750	Nov. 28
Dec. 15	3,500		
Adj.	1,850		
Balance	7,600		

Utilities Payable

Dec. 18	150	150	Nov. 16
		295	Dec. 20
		295	Balance

Office Supplies

Nov. 4	750		
Dec. 4	500	1,085	Adj.
Balance	165		

Telephone Payable

Dec. 18	175	175	Nov. 20
		325	Dec. 20
		325	Balance

Prepaid Rent

Dec. 1	3,000	1,000	Adj.
Balance	2,000		

Unearned Revenue

Adj.	400	750	Dec. 16
		350	Balance

Land

Dec. 1	85,000		
Balance	85,000		

Notes Payable

		7,200	Dec. 2
		7,200	Balance

Building

Dec. 1	35,000		
Balance	35,000		

Common Stock

		16,000	Nov. 1
		120,000	Dec. 1
		136,000	Balance

Accumulated Depreciation—Building

		500	Adj.
		500	Balance

Dividends

Nov. 15	50		
Nov. 30	100		
Dec. 31	300		
Balance	450		

P3-46, cont., Requirement 1, cont.

Canoes

Nov. 3	4,800		
Dec. 2	7,200		
Balance	12,000		

Canoe Rental Revenue

		1,400	Nov. 7
		3,000	Nov. 22
		4,500	Dec. 9
		3,500	Dec. 15
		400	Adj.
		1,850	Adj.
		14,650	Balance

Accumulated Depreciation—Canoes

		200	Adj.
		150	Adj.
		350	Balance

Rent Expense

Nov. 2	1,200		
Adj.	1,000		
Balance	2,200		

Wages Expense

Nov. 13	1,500		
Dec. 31	1,800		
Adj.	1,250		
Balance	4,550		

Utilities Expense

Nov. 16	150		
Dec. 20	295		
Balance	445		

Telephone Expense

Nov. 20	175		
Dec. 20	325		
Balance	500		

Supplies Expense

Adj.	1,085		
Balance	1,085		

Depreciation Expense—Building

Adj.	500		
Balance	500		

Depreciation Expense—Canoes

Adj.	200		
Adj.	150		
Balance	350		

Interest Expense

Adj.	50		
Balance	50		

P3-46, cont.
Requirement 2

CANYON CANOE COMPANY Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 12,125	
Accounts Receivable	7,600	
Office Supplies	165	
Prepaid Rent	2,000	
Land	85,000	
Building	35,000	
Accumulated Depreciation—Building		$ 500
Canoes	12,000	
Accumulated Depreciation—Canoes		350
Accounts Payable		3,050
Utilities Payable		295
Telephone Payable		325
Unearned Revenue		350
Wages Payable		1,250
Interest Payable		50
Notes Payable		7,200
Common Stock		136,000
Dividends	450	
Canoe Rental Revenue		14,650
Rent Expense	2,200	
Wages Expense	4,550	
Utilities Expense	445	
Telephone Expense	500	
Supplies Expense	1,085	
Depreciation Expense—Building	500	
Depreciation Expense—Canoes	350	
Interest Expense	50	
Total	**$ 164,020**	**$ 164,020**

P3-47
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Nov. 30	Supplies Expense	270*	
	Cleaning Supplies		270*
	To record supplies used.		
Nov. 30	Depreciation Expense	150	
	Accumulated Depreciation		150
	To record depreciation on depreciable assets.		
Nov. 30	Rent Expense	1,000*	
	Prepaid Rent		1,000*
	To record rent expense.		
Nov. 30	Insurance Expense	400*	
	Prepaid Insurance		400*
	To record insurance expense.		
Nov. 30	Unearned Revenue	625*	
	Service Revenue		625*
	To record service revenue earned that was collected in advance.		
Nov. 30	Interest Expense	59*	
	Interest Payable		59*
	To accrue interest expense.		

* Calculations:

Adjusting Journal Entry One:

$320	Cleaning Supplies prior to adjustment
(50)	Cleaning Supplies remaining
$270	Supplies Expense (cost of supplies used)

P3-47, cont.

Adjusting Journal Entry Three:

$4,000	Rent prepaid on November 2 for 4 months
÷ 4	Months
$1,000	Rent expense for November

Adjusting Journal Entry Four:

$4,800	Insurance prepaid on November 3 for 12 months
÷ 12	Months
$ 400	Insurance expense for November

Adjusting Journal Entry Five:

$15,000	Collected in advance on November 16 for one year
÷ 12	Months
$ 1,250	Service revenue earned per month

Thus,

$1,250	Service revenue earned per month
÷ 2	
$ 625	Service revenue earned November 16 through November 30

Adjusting Journal Entry Six:

$36,000 borrowed on Nov. 20, 6% interest rate per year

Thus,

$36,000 × 0.06 × (10 days / 365 days)
= $59* interest expense for Nov. 20 through Nov. 30
*rounded

P3-47, cont.
Requirement 2

CRYSTAL CLEAR CLEANING Adjusted Trial Balance November 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 51,650	
Accounts Receivable	4,000	
Cleaning Supplies	50	
Prepaid Rent	3,000	
Prepaid Insurance	4,400	
Equipment	5,400	
Truck	3,000	
Accumulated Depreciation		$ 150
Accounts Payable		1,245
Unearned Revenue		14,375
Interest Payable		59
Notes Payable		36,000
Common Stock		18,000
Dividends	1,400	
Service Revenue		5,725
Salaries Expense	400	
Advertising Expense	200	
Utilities Expense	175	
Supplies Expense	270	
Depreciation Expense	150	
Rent Expense	1,000	
Insurance Expense	400	
Interest Expense	59	
Total	$ 75,554	$ 75,554

Tying It All Together Case 3-1
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Year 1			
Dec. 31	Depreciation Expense—Structure	4,000*	
	Accumulated Depreciation—Structure		4,000*
	To record depreciation on structure.		
Year 2			
Dec. 31	Depreciation Expense—Structure	9,600*	
	Accumulated Depreciation—Structure		9,600*
	To record depreciation on structure.		

Straight-line depreciation per year = (Cost – Residual Value) / Useful Life in Years

= ($100,000 – $4,000) / 10 years

= $96,000 / 10 years

= $9,600 / 12 months

Year 1 = $800 per month × 5 months

= $4,000 Depreciation expense for August through December

Year 2 = $800 per month × 12 months

= $9,600 Depreciation expense for January through December

Requirement 2

Year 1:	
Structure	$100,000
Less: Accumulated Depreciation—Structure	(4,000)
Book value of structure	$96,000
Year 2:	
Structure	$100,000
Less: Accumulated Depreciation—Structure ($4,000 + $9,600)	(13,600)
Book value of structure	$86,400

Tying It All Together Case 3-1, cont.
Requirement 3

If iHeartCommunications, Inc. failed to record the adjusting entry related to the structure, depreciation expense would be understated and accumulated depreciation—structure would also be understated. This would cause net income on the income statement to be overstated and equity on the balance sheet overstated. In addition, the plant assets section of the balance sheet would also be overstated.

Decision Case 3-1

Swift Classified Ads
Income Statement
Year Ended December 31

Revenues:		
Service Revenue [$59,500 + $1,600 adj + $900 adj]		$ 62,000
Expenses:		
Salaries Expense [$17,000 + $1,200 adj]	$ 18,200	
Depreciation Expense [adj]	5,000	
Rent Expense [adj]	2,400	
Utilities Expense	800	
Supplies Expense [adj]	1,700	
Total Expenses		28,100
Net Income		$ 33,900

Advise Stasney to continue operating Swift Classified Ads. The company earned a profit during its first year, while many companies lose money early on.

Ethical Issue 3-1
Requirement 1

Net income is overstated by $3,300.

Calculations:

Items	
Improperly recorded a sale	$2,000
Failed to accrue salaries expense	900
Failed to record insurance expense	400
Total overstatement of net income	$3,300

Requirement 2

Students' responses will vary. Illustrative answers follow.

Steinbach is taking this action to improve the company's income in order to borrow on favorable terms and increase the likelihood of loan approval. His action is unethical because he is deliberately overstating reported income.

Steinbach would be helped by his unethical actions.

The bank would be harmed by Steinbach's unethical actions. Lending money under false pretenses may lead the bank to charge a lower interest rate (generating less interest revenue) than otherwise, and may increase the bank's exposure to risk of default.

Requirement 3

Students' responses will vary. Illustrative answers follow.

The accountant should refuse to follow Steinbach's instructions. Accountants are bound by standards of ethical conduct; following Steinbach's instructions would result in an overstatement of reported income (a misrepresentation of the facts), and would violate the standards of ethics.

Fraud Case 3-1
Requirement 1

Revenue could be accrued based on the percentage of completion. For a high-tech product, an engineer should be qualified to estimate the percentage of completion. The estimate might be based on the percentage of total costs incurred, the percentage of engineering steps completed, or some other reasonable criteria. The amount of revenue to accrue is equal to the percentage complete times the total estimated revenue.

Requirement 2

In 2019, XM would make an entry to debit a Loss and credit the Accounts Receivable account that had been recorded in 2018. Additionally, any costs that had been capitalized in an asset account would be written off (removed from the asset account).

Financial Statement Case 3-1
Requirement 1

Target Corporation might record adjusting entries for the following assets: Short-term investments, Inventory, Other current assets, and Property and equipment. In addition, although not discussed in this chapter, the instructor might wish to discuss that Intangible assets might also involve adjusting entries.

Requirement 2

Target Corporation might record adjusting entries for the following liabilities: Accounts payable, Accrued and other current liabilities, Deferred income taxes, Long-term debt and other borrowings, and other noncurrent liabilities.

Requirement 3

Target carries property and equipment at cost less accumulated depreciation. Depreciation is provided on the straight-line method over estimated useful lives or lease terms if shorter. The range of estimated useful lives is from 8 to 39 years for buildings and improvements, 2 to 15 years for fixtures and equipment, and 2 to 7 years for computer hardware and software.

Communication Activity 3-1

Under accrual basis accounting, adjusting entries are completed at the end of the accounting period to record revenues in the period in which they are earned (revenue recognition principle) and expenses in the same period as the revenues generated by the expenses (matching principle). Adjusting entries also update asset and liability accounts. Adjustments are needed to properly measure net income (loss) on the income statement and assets and liabilities on the balance sheet.

4

Completing the Accounting Cycle

It's the End of the Year, Now What?

The Bear Paw Inn just celebrated its one-year corporate anniversary. Christina Merthieu, the majority stockholder and manager, is excited that she has one year of experience working for a successful business. Although her previous job of working as a resort manager has helped her in dealing with customers, she has had to learn a lot about the accounting side of the business. Christina attributes her first-year success to always offering exceptional quality and personal service to her customers. In addition, Christina found a great accountant who has been helping her with the books.

From the beginning, Christina relied on her accountant to provide advice about recording transactions throughout the year. Now that the first year of business has been completed, she is ready to perform the final accounting tasks of the year. The corporation's accountant has told her that she can now prepare financial statements to help her evaluate the inn's profit for the year and its financial position. Bear Paw Inn will use those financial statements to assess the business's performance over the past year. The business is also ready to start the next year of business, and in order to do this, Christina must get the books ready for next year by recording closing entries.

What Happens at Year-End?

As we saw with Christina and the Bear Paw Inn, businesses have special tasks that have to be completed at the end of the accounting cycle. These tasks help the business in evaluating the past year's operations and also prepare the business to start a new year. For example, **Hyatt Hotels Corporation** must prepare annual financial statements that report on the business's profit or loss for the year and its financial position at the end of the year. In addition, Hyatt Hotels must prepare its books for next year—a process that is called *closing the books*, which consists of journalizing closing entries and updating the Retained Earnings account for the year. These final tasks in the accounting cycle are what you learn about in this chapter.

Chapter 4 Learning Objectives

1. Prepare the financial statements including the classified balance sheet
2. Use the worksheet to prepare financial statements
3. Explain the purpose of, journalize, and post closing entries
4. Prepare the post-closing trial balance
5. Describe the accounting cycle
6. Use the current ratio to evaluate business performance
7. Explain the purpose of, journalize, and post reversing entries (Appendix 4A)

In Chapter 3, our fictitious company, Smart Touch Learning, had completed the adjusting entries necessary to properly measure net income on the income statement and assets and liabilities on the balance sheet. Now that its accounts are up to date, Smart Touch Learning is ready to take the next step in the accounting cycle—preparing the financial statements. In this chapter, you review the financial statements that you have already learned about and learn how to prepare a more complete version of the balance sheet. In addition, you complete the accounting cycle by learning how to close the books.

HOW DO WE PREPARE FINANCIAL STATEMENTS?

Learning Objective 1
Prepare the financial statements including the classified balance sheet

The financial statements of Smart Touch Learning are prepared from the adjusted trial balance, which you learned in Chapter 3. Exhibit 4-1 shows the adjusted trial balance for Smart Touch Learning. In the right margin of the exhibit, we see how the accounts are distributed to the financial statements.

As always, the financial statements should be prepared in the following order:

1. **Income statement**—reports revenues and expenses and calculates net income or net loss for the time period.
2. **Statement of retained earnings**—shows how retained earnings changed during the period due to net income (or net loss) and dividends.
3. **Balance sheet**—reports assets, liabilities, and stockholders' equity as of the last day of the period.

IFRS

Following IFRS, companies must present a statement of profit or loss (income statement), statement of financial position (balance sheet), statement of changes in equity (similar to statement of retained earnings) and statement of cash flows—the same as U.S. companies. Yet the statements may look quite different. Revenue may be called *Turnover*, and Net Income may be called *Profit*. On the balance sheet, assets and liabilities are presented in a different order. Cash is often one of the last assets listed.

Exhibit 4-1 | **Adjusted Trial Balance**

SMART TOUCH LEARNING Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		$ 250
Furniture	18,000	
Accumulated Depreciation—Furniture		300
Accounts Payable		200
Utilities Payable		100
Salaries Payable		1,200
Interest Payable		100
Unearned Revenue		400
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		17,500
Rent Expense	3,000	
Salaries Expense	4,800	
Supplies Expense	400	
Utilities Expense	100	
Depreciation Expense—Building	250	
Depreciation Expense—Furniture	300	
Interest Expense	100	
Total	$ 128,050	$ 128,050

3. Balance Sheet Accounts

2. Statement of Retained Earnings Account

1. Income Statement Accounts

The financial statements for Smart Touch Learning are presented in Exhibit 4-2 (on the next page).

Relationships Among the Financial Statements

The arrows in Exhibit 4-2 (on the next page) show how the financial statements relate to each other.

1. Net income from the income statement increases Retained Earnings on the statement of retained earnings. A net loss decreases Retained Earnings.
2. Ending Retained Earnings from the statement of retained earnings goes to the balance sheet and makes total liabilities plus total stockholders' equity equal total assets, satisfying the accounting equation.

To solidify your understanding of these relationships, trace net income from the income statement to the statement of retained earnings. Then trace ending Retained Earnings to

Exhibit 4-2 | **Smart Touch Learning Financial Statements**

SMART TOUCH LEARNING
Income Statement
Two Months Ended December 31, 2018

Revenues:		
Service Revenue		$ 17,500
Expenses:		
Salaries Expense	$ 4,800	
Rent Expense	3,000	
Supplies Expense	400	
Depreciation Expense—Furniture	300	
Depreciation Expense—Building	250	
Utilities Expense	100	
Interest Expense	100	
Total Expenses		8,950
Net Income		**$ 8,550**

1

SMART TOUCH LEARNING
Statement of Retained Earnings
Two Months Ended December 31, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the two months	8,550
	8,550
Dividends	(5,000)
Retained Earnings, December 31, 2018	**$ 3,550**

2

SMART TOUCH LEARNING
Balance Sheet
December 31, 2018

Assets			**Liabilities**	
Cash		$ 12,200	Accounts Payable	$ 200
Accounts Receivable		1,800	Utilities Payable	100
Office Supplies		100	Salaries Payable	1,200
Prepaid Rent		2,000	Interest Payable	100
Land		20,000	Unearned Revenue	400
Building	$ 60,000		Notes Payable	60,000
Less: Acc. Depr.—Building	(250)	59,750	Total Liabilities	62,000
Furniture	18,000			
Less: Acc. Depr.—Furniture	(300)	17,700	**Stockholders' Equity**	
			Common Stock	48,000
			Retained Earnings	3,550
			Total Stockholders' Equity	51,550
Total Assets		**$ 113,550**	Total Liabilities and Stockholders' Equity	**$ 113,550**

the balance sheet. Note that these are the three main financial statements you learned about in the first chapter. They are always prepared in the order described previously: income statement, then statement of retained earnings, and then balance sheet.

Classified Balance Sheet

Classified Balance Sheet
A balance sheet that places each asset and each liability into a specific category.

So far we have presented the *unclassified* balance sheet of Smart Touch Learning. We are now ready for the balance sheet that is actually used in practice—called a **classified balance sheet**. In a classified balance sheet, each asset and each liability are placed into a specific category or classification.

In a classified balance sheet, assets are shown in order of liquidity and liabilities are classified by the order in which they must be paid, either *current* (within one year) or *long-term* (more than one year). **Liquidity** measures how quickly and easily an account can be converted to cash (because cash is the most liquid asset). Accounts Receivable are relatively liquid because receivables are collected quickly. Office Supplies are less liquid, and Buildings and Furniture are even less so because they take longer to convert to cash or to be used up.

Liquidity
A measure of how quickly an item can be converted to cash.

Assets

The balance sheet lists assets in the order of liquidity. A classified balance sheet reports two asset categories: *current assets* and *long-term assets*.

Current assets will be converted to cash, sold, or used up during the next 12 months or within the business's operating cycle if the cycle is longer than a year. The **operating cycle** is the time span when

1. Cash is used to acquire goods and services.
2. These goods and services are sold to customers.
3. The business collects cash from customers.

For most businesses, the operating cycle is a few months. Cash, Accounts Receivable, Office Supplies, and Prepaid Expenses are examples of current assets.

Long-term assets are all the assets that will not be converted to cash or used up within the business's operating cycle or one year, whichever is greater. Long-term assets are typically made up of three categories: long-term investments; property, plant, and equipment; and intangible assets.

Current Asset
An asset that is expected to be converted to cash, sold, or used up during the next 12 months or within the business's normal operating cycle if the cycle is longer than a year.

Operating Cycle
The time span during which cash is paid for goods and services, which are then sold to customers from whom the business collects cash.

Long-term Asset
An asset that will not be converted to cash or used up within the business's operating cycle or one year, whichever is greater.

Long-term Investments Notes Receivable and other investments that are held long-term are considered **long-term investments** and include investments in bonds or stocks in which the company intends to hold for longer than one year.

Long-term Investment
Investments in bonds (debt securities) or stocks (equity securities) in which the company intends to hold the investment for longer than one year.

Property, Plant, and Equipment Another category of long-term assets is **property, plant, and equipment** (also called *fixed assets* or *plant assets*). Land, Buildings, Furniture, and Equipment used in operations are plant assets. Property, plant, and equipment are presented in order of the category name, with Land (property) being presented first and then Buildings (plant) and Equipment, Furniture, and other accounts presented last.

Property, Plant, and Equipment
Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Intangible Assets Assets with no physical form are **intangible assets**. Examples of intangible assets include patents, copyrights, and trademarks. Intangible assets are long-term assets that convey special rights, such as the exclusive right to produce or sell an invention (patent) or book (copyright), or the symbol or image of a distinctive brand (trademark).

Intangible Asset
An asset with no physical form that is valuable because of the special rights it carries.

Liabilities

The balance sheet lists liabilities in the order in which they must be paid. The two liability categories reported on the balance sheet are *current liabilities* and *long-term liabilities*.

Current liabilities must be paid either with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year. Accounts Payable, Notes Payable due within one year, Salaries Payable, Interest Payable, and Unearned Revenue are all current liabilities. Any portion of a long-term liability that is due within the next year is also reported as a current liability. Current liabilities are listed in the order that they are due.

Long-term liabilities are all liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Many Notes Payable are long-term, such as a Smart Touch Learning's mortgage on its building.

Current Liability
A liability that must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.

Long-term Liability
A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.

Stockholders' Equity

Stockholders' equity represents the stockholders' claims to the assets of the business. The stockholders' equity section reported on the balance sheet is in part transferred from the ending Retained Earnings balance on the statement of retained earnings. The equity balance also reflects the stockholders' contributions through common stock. It represents the amount of assets that is left over after the corporation has paid its liabilities.

Exhibit 4-3 presents Smart Touch Learning's classified balance sheet. Notice that the company classifies each asset and each liability into specific categories, and that the total assets of $113,550 is the same as the total assets on the unclassified balance sheet in Exhibit 4-2.

Exhibit 4-3 | Classified Balance Sheet

This classified balance sheet contains both current assets and long-term assets, but there is only one category of long-term assets: Property, Plant, and Equipment. Other categories of long-term assets that could be included are Long-term Investments and Intangible Assets.

SMART TOUCH LEARNING Balance Sheet December 31, 2018			
Assets			
Current Assets:			
Cash		$ 12,200	
Accounts Receivable		1,800	
Office Supplies		100	
Prepaid Rent		2,000	
Total Current Assets			$ 16,100
Property, Plant, and Equipment:			
Land		20,000	
Building	$ 60,000		
Less: Accumulated Depreciation—Building	(250)	59,750	
Furniture	18,000		
Less: Accumulated Depreciation—Furniture	(300)	17,700	
Total Property, Plant, and Equipment			97,450
Total Assets			$ 113,550
Liabilities			
Current Liabilities:			
Accounts Payable		$ 200	
Utilities Payable		100	
Salaries Payable		1,200	
Interest Payable		100	
Unearned Revenue		400	
Total Current Liabilities			$ 2,000
Long-term Liabilities:			
Notes Payable			60,000
Total Liabilities			62,000
Stockholders' Equity			
Common Stock		48,000	
Retained Earnings		3,550	
Total Stockholders' Equity			51,550
Total Liabilities and Stockholders' Equity			$ 113,550

Compare the balance sheet in Exhibit 4-3 with the balance sheet in Exhibit 4-2. You'll notice two differences. Exhibit 4-3 is a classified balance sheet, but it is also in a different format than Exhibit 4-2. The balance sheet in Exhibit 4-3 is being presented in the *report form*, which lists the assets at the top and liabilities and stockholders' equity below. Smart Touch Learning's balance sheet in Exhibit 4-2 lists the assets on the left and the liabilities and the stockholders' equity on the right in an arrangement known as the *account form*. Although either form is acceptable, the *report form* is more popular.

Try It!

For each account listed, identify the category in which it would appear on a classified balance sheet.

1. Patents
2. Mortgage Payable (due in five years)
3. Land
4. Office Supplies
5. Unearned Revenue
6. Investments in stock of another company held long-term
7. Accumulated Depreciation—Furniture

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S4-1 through S4-5. MyAccountingLab

HOW COULD A WORKSHEET HELP IN PREPARING FINANCIAL STATEMENTS?

Learning Objective 2
Use the worksheet to prepare financial statements

Previously you learned how a worksheet can be used to help prepare adjusting entries. Now you'll learn how the worksheet can be used to help in the preparation of financial statements. Exhibit 4-4 (on the next page) shows the completed worksheet for Smart Touch Learning. Sections 1 through 4 of the worksheet, shown with a purple background, were completed in Chapter 3. You are now ready to complete the remaining sections that will help in preparing the financial statements.

Section 5—Income Statement

The income statement section includes only revenue and expense accounts. The revenues and expenses from the adjusted trial balance section will be transferred into the appropriate column in the income statement section. For example, the $17,500 credit balance for Service Revenue in the adjusted trial balance section will be carried over into the credit column in the income statement section. Each debit and credit column will then be totaled.

Section 6—Balance Sheet

The balance sheet section includes the asset and liability accounts and all equity accounts except revenues and expenses. The balance of each of these accounts will be transferred from the adjusted trial balance section of the worksheet to the appropriate column in the balance sheet section. For example, Accumulated Depreciation—Furniture, a contra-asset, has a $300 credit balance in the adjusted trial balance section. This amount will be reported as a credit of $300 in the balance sheet section. Each debit and credit column will then be totaled.

Exhibit 4-4 | **Completed Worksheet**

	SMART TOUCH LEARNING Worksheet December 31, 2018												
	Account Names	**Unadjusted Trial Balance**			**Adjustments**			**Adjusted Trial Balance**		**Income Statement**		**Balance Sheet**	
		Debit	**Credit**		**Debit**	**Credit**		**Debit**	**Credit**	**Debit**	**Credit**	**Debit**	**Credit**
7	Cash	$ 12,200						$ 12,200				$ 12,200	
8	Accounts Receivable	1,000		(h)	$ 800			1,800				1,800	
9	Office Supplies	500				$ 400	(b)	100				100	
10	Prepaid Rent	3,000				1,000	(a)	2,000				2,000	
11	Land	20,000						20,000				20,000	
12	Building	60,000						60,000				60,000	
13	Accumulated Depreciation—Building					250	(d)		$ 250				$ 250
14	Furniture	18,000						18,000				18,000	
15	Accumulated Depreciation—Furniture					300	(c)		300				300
16	Accounts Payable		$ 200						200				200
17	Utilities Payable		100						100				100
18	Salaries Payable					1,200	(f)		1,200				1,200
19	Interest Payable					100	(g)		100				100
20	Unearned Revenue		600	(e)	200				400				400
21	Notes Payable		60,000						60,000				60,000
22	Common Stock		48,000						48,000				48,000
23	Dividends	5,000						5,000				5,000	
24	Service Revenue		16,500			1,000	(e,h)		17,500		$ 17,500		
25	Rent Expense	2,000		(a)	1,000			3,000		$ 3,000			
26	Salaries Expense	3,600		(f)	1,200			4,800		4,800			
27	Supplies Expense			(b)	400			400		400			
28	Utilities Expense	100						100		100			
29	Depreciation Expense—Building			(d)	250			250		250			
30	Depreciation Expense—Furniture			(c)	300			300		300			
31	Interest Expense			(g)	100			100		100			
32	**Total**	**$ 125,400**	**$ 125,400**		**$ 4,250**	**$ 4,250**		**$ 128,050**	**$ 128,050**	$ 8,950	$ 17,500	$ 119,100	$ 110,550
33									Net Income	8,550			8,550
34	**Total**									**$ 17,500**	**$ 17,500**	**$ 119,100**	**$ 119,100**

Section 5

Section 6

Section 7

Sections 1–4

Net Income = $17,500 − $8,950

Section 7—Determine Net Income or Net Loss

Compute net income or net loss as total revenues minus total expenses ($17,500 − $8,950). Enter net income (loss) as the balancing amount in the income statement and balance sheet sections. If net income exists, the balance will be entered in the *debit* column of the income statement section and the *credit* column of the balance sheet section. For example, Smart Touch Learning has net income of $8,550. This amount should be entered as a debit in the income statement section and a credit in the balance sheet section.

If expenses exceed revenues, the result is a net loss. In that event, print Net Loss on the worksheet next to the result. The net loss amount should be entered in the *credit* column of the income statement (to balance out) and in the *debit* column of the balance sheet (to balance out). The main thing to remember is that the net income or net loss is the balancing amount on the worksheet. It should always be entered on the side that makes the debit and credit columns balance.

Smart Touch Learning has now completed the worksheet as of December 31. Remember that the worksheet is an internal tool that can be used to help in recording adjusting entries and preparing financial statements. The adjusting entries still need to be recorded in the journal and posted to the ledger (as shown in Chapter 3), and the financial statements must still be prepared (as shown in Exhibits 4-2 and 4-3).

What if Smart Touch Learning had a net loss instead of net income? Would the amount of net loss be entered in the debit column of the income statement section and the credit column of the balance sheet section?

Try It!

For each account listed, identify whether the account would appear in either the income statement section or the balance sheet section of the worksheet. Assuming normal balances, identify if the account would be recorded in the debit (DR) or credit (CR) column.

8. Service Revenue
9. Accounts Payable
10. Cash
11. Depreciation Expense—Building
12. Dividends
13. Accumulated Depreciation—Building

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S4-6 through S4-8. MyAccountingLab

WHAT IS THE CLOSING PROCESS, AND HOW DO WE CLOSE THE ACCOUNTS?

Learning Objective 3
Explain the purpose of, journalize, and post closing entries

At the end of the accounting cycle, after the financial statements have been prepared, Smart Touch Learning is ready to close the books. Often referred to as the closing process, this consists of journalizing and posting the closing entries in order to get the accounts ready for the next period. The **closing process** zeroes out all revenue accounts and all expense accounts in order to measure each period's net income separately from all other periods. It also updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to the stockholders. The closing process prepares the accounts for the next time period by setting the balances of revenues, expenses, and dividends to zero. By completing the closing process, the business is following the time period concept in that it is slicing its activities into small time segments and preparing financial statements for only those specific periods.

Closing Process
A step in the accounting cycle that occurs at the end of the period. The closing process consists of journalizing and posting the closing entries to set the balances of the revenues, expenses, Income Summary, and Dividends accounts to zero for the next period.

Recall that the income statement reports net income for a specific period. For example, Smart Touch Learning's net income for the two months ended December 31, 2018, relates exclusively to November and December, 2018. At December 31, 2018, Smart Touch Learning closes its revenue and expense accounts for the last two months of the year. For this reason, revenues and expenses are called **temporary accounts** (also known as *nominal accounts*). For example, Smart Touch Learning's balance of Service Revenue at December 31, 2018, is $17,500. This balance relates exclusively to the last two months of 2018 and must be zeroed out before the company records revenue for the next year. Similarly, the various expense account balances are for the last two months of 2018 only and must also be zeroed out at the end of the year.

Temporary Account
An account that relates to a particular accounting period and is closed at the end of that period—the revenues, expenses, Income Summary, and Dividends accounts.

The Dividends account is also temporary and must be closed at the end of the period because it measures the payments to stockholders for only that one period. All temporary accounts (revenues, expenses, and dividends) are closed (zeroed). The balances of temporary accounts do not carry forward into the next time period. Instead, the business starts the new time period with a zero beginning balance in the temporary accounts.

By contrast, the **permanent accounts** (also known as *real accounts*)—the assets, liabilities, Common Stock, and Retained Earnings—are not closed at the end of the period. Permanent account balances are carried forward into the next time period. All accounts on the balance sheet are permanent accounts.

Permanent Account
An account that is *not* closed at the end of the period—the asset, liability, Common Stock, and Retained Earnings accounts.

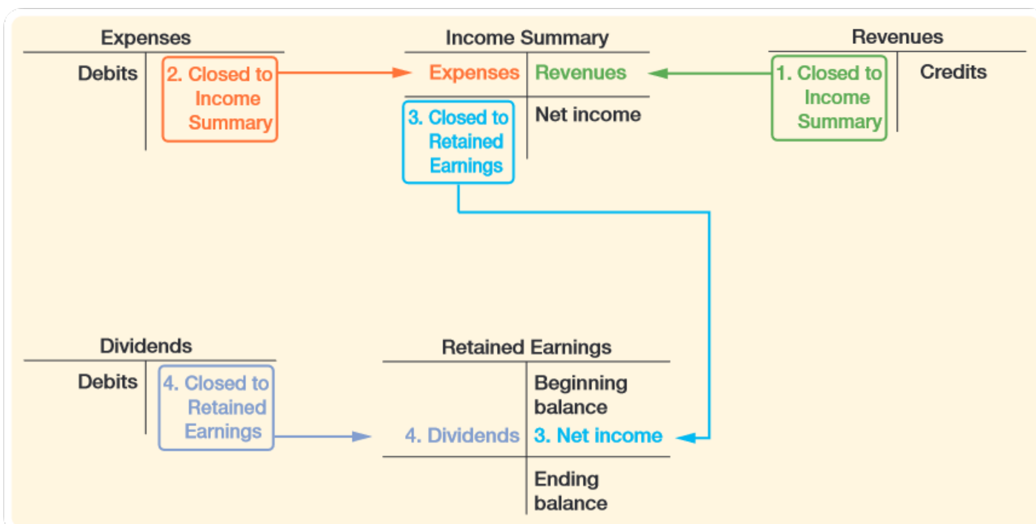
Closing Entries
Entries that transfer the revenues, expenses, and Dividends balances to the Retained Earnings account to prepare the company's books for the next period.

Income Summary
A temporary account into which revenues and expenses are transferred prior to their final transfer into the Retained Earnings account. Summarizes net income (or net loss) for the period.

Closing entries transfer the revenues, expenses, and Dividends balances to the Retained Earnings account to prepare the company's books for the next period. This transfer to Retained Earnings also causes the Retained Earnings ledger account to now equal its balance reported on the balance sheet.

As an intermediate step, the revenues and the expenses may be transferred first to an account titled **Income Summary**. The Income Summary account *summarizes* the net income (or net loss) for the period by collecting the sum of all the expenses (a debit) and the sum of all the revenues (a credit). The Income Summary account is like a temporary "holding tank" that shows the amount of net income or net loss of the current period. Its ending balance—net income or net loss—is then transferred (closed) to the Retained Earnings account (the final account in the closing process). Exhibit 4-5 summarizes the closing process.

Exhibit 4-5 | The Closing Process



When thinking about which accounts to close, consider your grades in this class as an example. If you made a failing grade on an exam in this class, would you want your exam grade for this class to carry forward to your next accounting class? Your answer would probably be no, because your exam grade in this class does not necessarily represent your knowledge in your next class. In this example, your exam grades are temporary and should not carry forward to your next accounting class. In the same sense, a business's revenues, expenses, and dividends for a specific time period should not be carried forward to the next time period because doing so does not accurately reflect that future period.

Closing Temporary Accounts—Net Income for the Period

As stated previously, all temporary accounts are closed (zeroed out) during the closing process. Revenue, expenses, and dividends accounts are not permanent. Only the balance sheet accounts are permanent. The four steps in closing the books follow (and are illustrated in Exhibit 4-6).

Step 1: Make the revenue accounts equal zero via the Income Summary account. This closing entry transfers total revenues to the *credit* side of the Income Summary account.

For example, Smart Touch Learning has a $17,500 credit balance in Service Revenue. To close this account (make it zero), we *debit* Service Revenue and *credit* Income Summary.

Service Revenue

		17,500	Adj. Bal.
Clos. 1	17,500		
		0	Bal.

Income Summary

		17,500	Clos. 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	17,500	
	Income Summary		17,500
	To close revenue.		

A = L + E↑↓
Service Revenue↓
Income Summary↑

Step 2: Make expense accounts equal zero via the Income Summary account. This closing entry transfers total expenses to the *debit* side of the Income Summary account.

As an example, we will review the Rent Expense account for Smart Touch Learning, which has a $3,000 debit balance. This account will be closed with a *credit* to Rent Expense.

Rent Expense

Adj. Bal.	3,000		
		3,000	Clos. 2
Bal.	0		

Smart Touch Learning will close all expense accounts in the same manner. This will most likely be done with a compound closing entry. Each individual expense account will be *credited* and the Income Summary account will be *debited* for the total amount of expenses.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	8,950	
	Rent Expense		3,000
	Salaries Expense		4,800
	Supplies Expense		400
	Utilities Expense		100
	Depreciation Expense—Building		250
	Depreciation Expense—Furniture		300
	Interest Expense		100
	To close expenses.		

A = L + E↑↓
Income Summary↓
Expenses↓

The Income Summary account now holds the net income of $8,550 for the period. The Income Summary T-account after closing revenues and expenses is:

Income Summary

Clos. 2	8,950	17,500	Clos. 1
		8,550	Bal.

Step 3: Make the Income Summary account equal zero via the Retained Earnings account. This closing entry transfers net income (or net loss) to the Retained Earnings account.

Smart Touch Learning has an $8,550 credit balance in the Income Summary account. This represents net income for the period. Net income will now be transferred to the Retained Earnings account. We will *debit* Income Summary and *credit* Retained Earnings. Notice that this closing entry, in effect, increases the Retained Earnings account for the net income of the period.

Income Summary

Clos. 2	8,950	17,500	Clos. 1
		8,550	Bal.
Clos. 3	8,550		
		0	Bal.

Net Income

Retained Earnings

		0	Adj. Bal.
		8,550	Clos. 3

A = L + E↑↓
Income Summary↓
Retained Earnings↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	8,550	
	Retained Earnings		8,550
	To close Income Summary.		

Step 4: Make the Dividends account equal zero via the Retained Earnings account. This entry transfers the dividends to the *debit* side of the Retained Earnings account.

Smart Touch Learning has a $5,000 debit balance in the Dividends account. This account will be closed with a *debit* to Retained Earnings and a *credit* to Dividends.

Retained Earnings

		0	Adj. Bal.
Clos. 4	5,000	8,550	Clos. 3
		3,550	Bal.

Balance of Retained Earnings on the balance sheet

Dividends

Adj. Bal.	5,000		
		5,000	Clos. 4
Bal.	0		

A = L + E↑↓
Retained Earnings↓
Dividends↓

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Retained Earnings	5,000	
	Dividends		5,000
	To close Dividends.		

Closing Temporary Accounts—Net Loss for the Period

If a business had a net loss for the period, closing entries 1, 2, and 4 would be similar to those completed for net income. However, the closing entry to close the Income Summary account would be different. Consider this example. Suppose a business had a net loss of $2,000. The Income Summary T-account would hold a *debit* balance instead of a *credit* balance. Therefore, the closing entry to close Income Summary would be a *debit* to Retained Earnings and a *credit* to Income Summary.

What if a business had a net loss for the period? Would the closing entries be the same?

Income Summary

Clos. 2	5,000	3,000	Clos. 1
Bal.	2,000		
		2,000	Clos. 3
		0	Bal.

Net Loss

Retained Earnings

Clos. 3	2,000	0	Adj. Bal.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Retained Earnings	2,000	
	Income Summary		2,000
	To close Income Summary.		

A	=	L	+	E↑↓
				Retained Earnings↓ Income Summary↑

Notice that the effect of this closing entry decreases Retained Earnings. This is because a net loss decreases the Retained Earnings account.

Closing Temporary Accounts—Summary

Exhibit 4-6 (on the next page) shows the complete closing process for Smart Touch Learning. Panel A gives the closing entries, and Panel B shows the accounts after posting. After the closing entries, Retained Earnings ends with a balance of $3,550. Trace this balance to the statement of retained earnings and then to the balance sheet in Exhibit 4-2.

Exhibit 4-6 | Journalizing and Posting Closing Entries

Panel A: Journalizing

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	17,500	
	Income Summary		17,500
	To close revenue.		
31	Income Summary	8,950	
	Rent Expense		3,000
	Salaries Expense		4,800
	Supplies Expense		400
	Utilities Expense		100
	Depreciation Expense—Building		250
	Depreciation Expense—Furniture		300
	Interest Expense		100
	To close expenses.		
31	Income Summary	8,550	
	Retained Earnings		8,550
	To close Income Summary.		
31	Retained Earnings	5,000	
	Dividends		5,000
	To close Dividends.		

When a business uses a computerized accounting system, the software automatically closes the books. The software identifies the temporary accounts, records the closing entries, and posts to the ledger accounts. The closing entries are completed in a matter of seconds.

Panel B: Posting

Retained Earnings

Clos. 4	5,000	0	Adj. Bal.
		8,550	Clos. 3
		3,550	Bal.

Dividends

Adj. Bal.	5,000	5,000	Clos. 4
Bal.	0		

Service Revenue

Clos. 1	17,500	17,500	Adj. Bal.
		0	Bal.

Income Summary

Clos. 2	8,950	17,500	Clos. 1
		8,550	Bal.
Clos. 3	8,550		
		0	Bal.

Rent Expense

Adj. Bal.	3,000	3,000	Clos. 2
Bal.	0		

Salaries Expense

Adj. Bal.	4,800	4,800	Clos. 2
Bal.	0		

Supplies Expense

Adj. Bal.	400	400	Clos. 2
Bal.	0		

Utilities Expense

Adj. Bal.	100	100	Clos. 2
Bal.	0		

Depreciation Expense—Building

Adj. Bal.	250	250	Clos. 2
Bal.	0		

Depreciation Expense—Furniture

Adj. Bal.	300	300	Clos. 2
Bal.	0		

Interest Expense

Adj. Bal.	100	100	Clos. 2
Bal.	0		

TYING IT ALL TOGETHER

Hyatt Hotels Corporation was founded in 1957 when Jay Pritzker purchased the first Hyatt hotel next to the Los Angeles International Airport. Today, Hyatt Hotels owns and operates hotels in 52 countries around the world. For the year ended December 31, 2015, the company reported revenues totaling $4.3 billion with net income of $124 million. (You can find Hyatt Hotels Corporation's annual report at https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm)

Would Hyatt Hotels Corporation record closing entries and why?

Hyatt Hotels would record closing entries in order to get the accounts ready for next year. All companies record closing entries in order to zero out all revenue and expense accounts. In addition, the closing process updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to stockholders.

Why are temporary accounts important in the closing process? What type of temporary accounts would Hyatt Hotels Corporation have?

Temporary accounts are important in the closing process because these accounts relate to a particular accounting period and are closed at the end of the period. Revenues, expenses, and dividends are all temporary accounts. Some examples of temporary accounts that Hyatt Hotels might have include Owned and Leased Hotels Revenue; Selling, General, and Administrative Expense; Interest Expense; and Dividends.

When would Hyatt Hotels Corporation prepare its post-closing trial balance? What type of accounts would be reported on this trial balance?

A post-closing trial balance is a list of all permanent accounts and their balances at the end of the accounting period and is prepared after the closing process. Hyatt Hotels would report only permanent accounts on its post-closing trial balance. Some examples of permanent accounts that Hyatt Hotels might have include assets, such as Cash and Property; liabilities, such as Accounts Payable; and equity, such as Common Stock and Retained Earnings.

Try It!

Benson Auto Repair had the following account balances after adjustments. Assume all accounts had normal balances.

Cash	$ 4,000	Common Stock	$ 20,000
Accounts Receivable	3,200	Retained Earnings, January 1	15,700
Prepaid Rent	1,900	Dividends	2,100
Office Supplies	3,000	Service Revenue	1,600
Equipment	34,800	Depreciation Expense—Equipment	300
Accumulated Depreciation—Equipment	1,600	Salaries Expense	800
Accounts Payable	5,400	Rent Expense	500
Notes Payable (long-term)	7,000	Utilities Expense	600
		Supplies Expense	100

14. Prepare the closing entries for Benson at December 31.

15. What is the balance of Retained Earnings after closing entries have been recorded? (Use a T-account to determine the balance.)

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S4-9 through S4-11. MyAccountingLab

HOW DO WE PREPARE A POST-CLOSING TRIAL BALANCE?

Learning Objective 4
Prepare the post-closing trial balance

Post-Closing Trial Balance
A list of the accounts and their balances at the end of the period after journalizing and posting the closing entries. It should include only permanent accounts.

After closing entries are recorded and posted, the accounting cycle ends with a **post-closing trial balance** (see Exhibit 4-7). This step lists the accounts and their balances after closing.

Only assets, liabilities, Common Stock, and Retained Earnings accounts (permanent accounts) appear on the post-closing trial balance. No temporary accounts—revenues, expenses, Income Summary, or Dividends—are included because they have been closed (their balances are zero). Also notice that the Retained Earnings account has been updated to reflect the period's net income (or net loss) and any dividends. The ledger is now up to date and ready for the next period.

Notice that the Adjusted Trial Balance for Smart Touch Learning (Exhibit 4-1) and the Post-Closing Trial Balance (Exhibit 4-7) are similar. An easy way to make sure that you didn't make an error in the closing process is to compare the Adjusted Trial Balance to the Post-Closing Trial Balance to ensure that: (1) account balances above Retained Earnings are the same; (2) account balances below Retained Earnings are zero and, therefore, not included; and (3) the Retained Earnings account balance matches Retained Earnings on the balance sheet.

Exhibit 4-7 | **Post-Closing Trial Balance**

SMART TOUCH LEARNING
Post-Closing Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		$ 250
Furniture	18,000	
Accumulated Depreciation—Furniture		300
Accounts Payable		200
Utilities Payable		100
Salaries Payable		1,200
Interest Payable		100
Unearned Revenue		400
Notes Payable		60,000
Common Stock		48,000
Retained Earnings		3,550
Total	**$ 114,100**	**$ 114,100**

Permanent Accounts

Try It!

For each account listed, identify whether the account would appear on the post-closing trial balance. Indicate either yes or no.

16. Dividends

17. Service Revenue

18. Cash

19. Advertising Expense

20. Retained Earnings

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S4-12. MyAccountingLab

WHAT IS THE ACCOUNTING CYCLE?

Learning Objective 5
Describe the accounting cycle

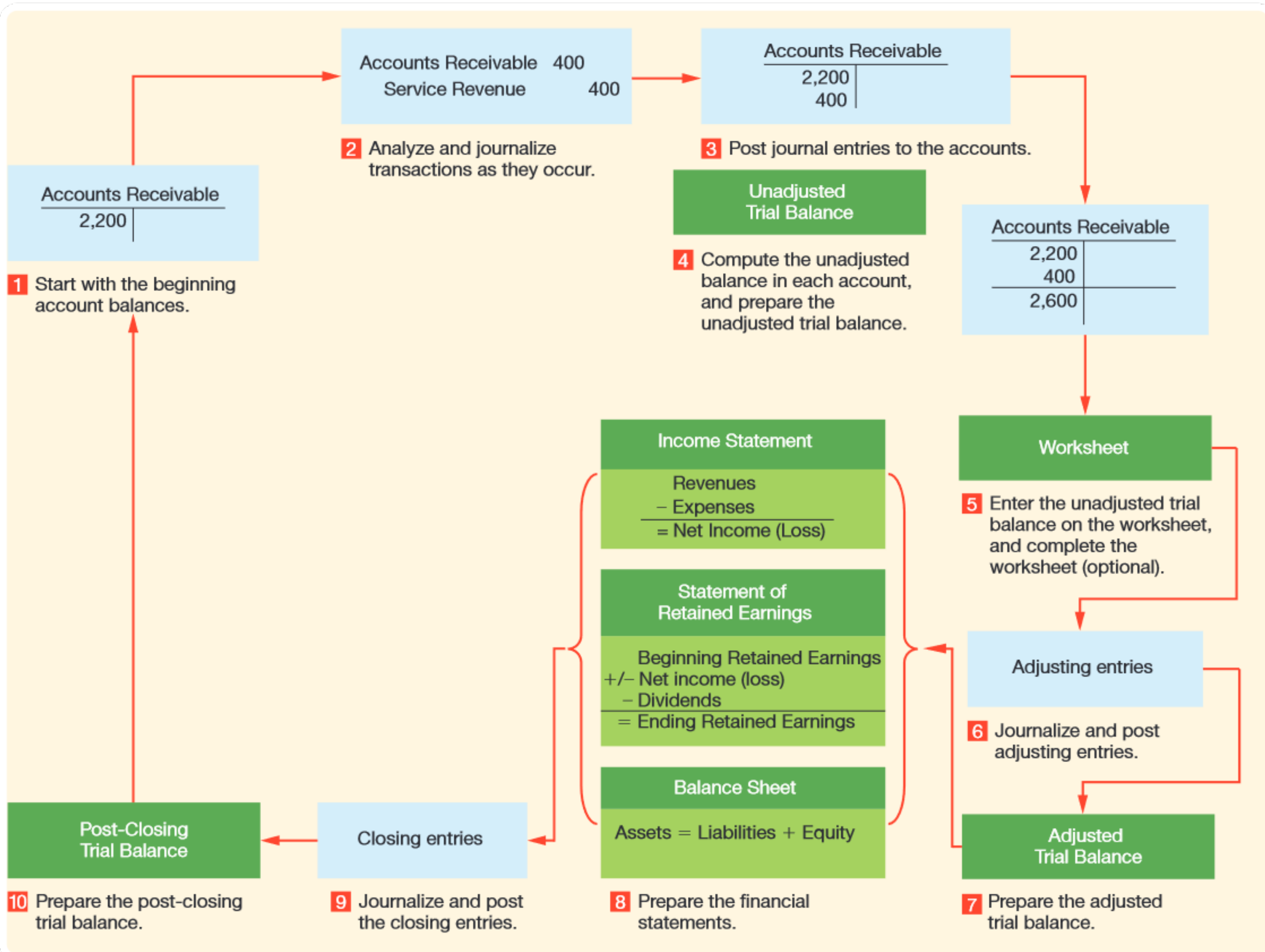
We have now completed the accounting cycle for Smart Touch Learning. The **accounting cycle** is the process by which companies produce their financial statements for a specific period. It is the steps that are followed throughout the time period. The accounting cycle starts with the beginning asset, liability, and stockholders' equity account balances left over from the preceding period. Exhibit 4-8 (on the next page) outlines the complete accounting cycle of Smart Touch Learning and every other business. Start with Step 1 and move clockwise.

Accounting Cycle
The process by which companies produce their financial statements for a specific period.

Accounting takes place at two different times:

- During the period (Steps 1 through 3)—Journalizing transactions and posting to the accounts
- End of the period (Steps 4 through 10)—Adjusting the accounts, preparing the financial statements, and closing the accounts

Exhibit 4-8 | The Accounting Cycle



Try It!

21. The steps of the accounting cycle are presented below. Identify the correct order of the steps.

  a. Journalize and post the closing entries.
  b. Start with the beginning account balances.
  c. Prepare the financial statements.
  d. Compute the unadjusted balance in each account, and prepare the unadjusted trial balance.
  e. Journalize and post adjusting entries.
  f. Enter the unadjusted trial balance on the worksheet, and complete the worksheet (optional).
  g. Prepare the adjusted trial balance.
  h. Analyze and journalize transactions as they occur.
  i. Post journal entries to the accounts.
  j. Prepare the post-closing trial balance.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S4-13. MyAccountingLab

HOW DO WE USE THE CURRENT RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use the current ratio to evaluate business performance

Accounting is designed to provide information that stockholders, managers, and lenders can use to make decisions. A bank considering lending money to a business must predict whether that business can repay the loan. If a business already has a lot of debt, repayment is less certain than if it does not owe much money. In this chapter, we will introduce another ratio that can be used to measure the business's financial position, the current ratio.

The **current ratio** measures a company's ability to pay its current liabilities with its current assets. This ratio is computed as follows:

Current Ratio

Measures the company's ability to pay current liabilities from current assets. Total current assets / Total current liabilities.

Current ratio = Total current assets / Total current liabilities

A company prefers to have a high current ratio because that means it has plenty of current assets to pay its current liabilities. A current ratio that has increased from the prior period indicates improvement in a company's ability to pay its current debts. A current ratio that has decreased from the prior period signals deterioration in the company's ability to pay its current liabilities.

A rule of thumb: A strong current ratio is 1.50, which indicates that the business has $1.50 in current assets for every $1.00 in current liabilities. A current ratio of 1.00 is considered low and somewhat risky.

Returning to **Kohl's Corporation,** we can now evaluate Kohl's current ratio. Kohl's had the following total current assets and current liabilities, found on the balance sheet. Visit http://www.pearsonhighered.com/Horngren to view a link to Kohls' Corporation's annual report.

	As of Jan. 30, 2016	As of Jan. 31, 2015
Total current assets (in millions)	$ 5,076	$ 5,580
Total current liabilities (in millions)	2,714	2,859

The current ratio for Kohl's Corporation as of January 30, 2016, follows:

Current ratio = $5,076 / $2,714 = 1.87*

*rounded

In comparison, the current ratio as of January 31, 2015, for Kohl's Corporation was:

Current ratio = $5,580 / $2,859 = 1.95*

*rounded

The current ratio has decreased a little from 2015 to 2016. This indicates that Kohl's Corporation has deteriorated slightly in its ability to pay its current debts. Given that the current ratio is above 1.5 for both years, Kohl's Corporation would be considered a less risky investment than another business with a lower current ratio. Similarly, creditors would be more willing to extend credit to Kohl's Corporation than another company with a lower current ratio.

ETHICS

Should revenue be recorded early?

Carnival Custom Painting's controller, Kristi Seay, is hoping to get a loan from a local bank. The business's van engine has just died, and the corporation has no extra cash to replace the engine. It needs a short-term loan of $3,000. A teller at the bank has told Kristi that the bank will only approve the loan if the business has a current ratio that is above 1.2. Currently, Carnival's current ratio is 1.1. The corporation has just received a contract for painting a new commercial building. Kristi has told the teller that she expects revenue of $15,000 from the contract but won't receive payment until the job is completed. The business plans on starting the job next week but won't be finished for another two months, not soon enough to use the cash to replace the engine in the van. The teller has suggested to Kristi that she go ahead and record the revenue and cash receipt of the painting contract even though it hasn't been completed. This, he tells her, will increase the business's current assets and thereby increase the current ratio to 1.4, well above the bank minimum. What should Kristi do? What would you do?

Solution

Kristi should not record the revenue and cash receipt early. The revenue recognition principle requires that businesses record revenue only when it has been earned. Given that Carnival Custom Painting has not yet started the job, no revenue has been earned. Kristi should look for alternative sources of financing instead of trying to manipulate the current ratio to meet the minimum required by the bank. Another possibility would be for Kristi to renegotiate the contract with the new client to receive $3,000 in advance instead of after the completion of the job. This would allow Kristi to make the repairs on the van and not have to borrow the money from the bank.

Try It!

22. Benson Auto Repair has the following account balances at December 31, 2018, from its adjusted trial balance. Compute Benson Auto Repair's current ratio.

Cash	$ 4,000	Common Stock	$ 20,000
Accounts Receivable	3,200	Retained Earnings	15,700
Prepaid Rent	1,900	Dividends	2,100
Office Supplies	3,000	Service Revenue	1,600
Equipment	34,800	Depreciation Expense—Equipment	300
Accumulated Depreciation—Equipment	1,600	Salaries Expense	800
Accounts Payable	5,400	Rent Expense	500
Notes Payable (long-term)	7,000	Utilities Expense	600
		Supplies Expense	100

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S4-14. MyAccountingLab

APPENDIX 4A: Reversing Entries: An Optional Step

WHAT ARE REVERSING ENTRIES?

Learning Objective 7
Explain the purpose of, journalize, and post reversing entries

Reversing entries are special journal entries that ease the burden of accounting for transactions in a later period. Reversing entries are the exact opposite of certain adjusting entries. Reversing entries are used in conjunction with accrual-type adjustments, such as accrued salaries expense and accrued service revenue. Generally Accepted Accounting Principles do not require reversing entries. They are used only for convenience and to save time.

Accounting for Accrued Expenses

To see how reversing entries work, let's return to Smart Touch Learning. In the unadjusted trial balance, Salaries Expense has a debit balance of $3,600 for salaries paid during November and December. At December 31, the business still owes it employees an additional $1,200 for the last half of the month, so the business makes the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
	To accrue salaries expense.		

A	=	L↑	+	E↓
		Salaries Payable↑		Salaries Expense↑

After posting, the accounts are updated as of December 31:

Salaries Payable

Debit	Credit	
	1,200	Adj.
	1,200	Adj. Bal.

Salaries Expense

	Debit	Credit
Nov. 15	1,200	
Dec. 1	1,200	
Dec. 15	1,200	
Adj.	1,200	
Adj. Bal.	4,800	

After the adjusting entry, the following are noted:

- The income statement reports Salaries Expense of $4,800.
- The balance sheet reports Salaries Payable of $1,200.

The $4,800 debit balance of Salaries Expense is closed at December 31, 2018, with the following closing entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	4,800	
	Salaries Expense		4,800
	To close expense.		

A	=	L	+	E↑↓
				Income Summary↓ Salaries Expense↓

APPENDIX 4A

After posting the closing entry, Salaries Expense has a zero balance as follows:

Salaries Expense

Nov. 15	1,200		
Dec. 1	1,200		
Dec. 15	1,200		
Adj.	1,200		
Adj. Bal.	4,800		
		4,800	Clos.
Bal.	0		

Accounting Without a Reversing Entry

Assume that Smart Touch Learning will pay its employees the second half of December's salaries along with the first half of January on January 15, 2019. On January 15, the company would record the following journal entry:

A↓	=	L↓	+	E↓
Cash↓		Salaries Payable↓		Salaries Expense↑

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 15	Salaries Payable	1,200	
	Salaries Expense	1,200	
	Cash		2,400
	To record payment of salaries.		

After posting the cash payment, the Salaries Payable and Salaries Expense accounts are as follows:

Salaries Payable

		1,200	Bal. 1/1/19
Jan. 15	1,200		
		0	Bal.

Salaries Expense

Jan. 15	1,200	

This method of recording the cash payment is correct. However, it wastes time because the business must refer back to the December 31 adjustments. Otherwise, the business does not know the amount of the debit to Salaries Payable (in this example $1,200). Searching December's adjusting entries wastes time and money. To save time, accountants can use reversing entries.

Reversing Entry
A special journal entry that eases the burden of accounting for transactions in the next period. Such entries are the exact opposite of a prior adjusting entry.

Accounting with a Reversing Entry

A **reversing entry** switches the debit and the credit of a previous entry. A reversing entry, then, is the exact opposite of a prior adjusting entry. The reversing entry is dated the first day of the new period.

To illustrate reversing entries, recall that on December 31 Smart Touch Learning made the following adjusting entry to accrue Salaries Expense:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
	To accrue salaries expense.		

A	=	L↑	+	E↓
		Salaries Payable↑		Salaries Expense↑

The reversing entry just reverses the debit and the credit of the adjustment:

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 1	Salaries Payable	1,200	
	Salaries Expense		1,200
	To reverse the salaries adjusting entry.		

A	=	L↓	+	E↑
		Salaries Payable↓		Salaries Expense↓

Observe that the reversing entry is dated the first day of the new period. It is the exact opposite of the adjusting entry. Ordinarily, the accountant who makes the adjusting entries will also prepare reversing entries at the same time. Smart Touch Learning dates the reversing entry as of January 1 so that it affects only the new period. Note how the accounts appear after the accounting clerk posts the reversing entry:

Salaries Payable

Debit	Credit
	1,200 Adj.
	1,200 Bal. 1/1/19
Rev. Jan. 1 1,200	
	0 Bal.

Salaries Expense

Debit	Credit
Bal. 1/1/19 0	
	1,200 Rev. Jan. 1

The arrow between the T-accounts shows the transfer of the $1,200 from Salaries Payable to Salaries Expense. This credit in Salaries Expense does not mean that the entity has negative salaries expense, as you might think. Instead, the odd credit balance in the Salaries Expense account is merely a temporary result of the reversing entry. The credit balance is eliminated on January 15, when Smart Touch Learning pays the payroll and debits Salaries Expense:

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Salaries Expense	2,400	
	Cash		2,400
	To record payment of salaries.		

A↓	=	L	+	E↓
Cash↓				Salaries Expense↑

APPENDIX 4A

This payment is posted to the Salaries Expense account as follows:

Salaries Expense			
Bal. 1/1/19	0		
Jan. 15	2,400	1,200	Rev. Jan. 1
Bal.	1,200		

Now Salaries Expense has a debit balance of $1,200, which is correct and represents only the January salaries. The payment of salaries covered two periods: $1,200 related to 2018 and $1,200 related to 2019. The Salaries Expense account should only contain the amount that relates to 2019.

Try It!

Winters Landscape Services accrued $4,000 of Salaries Expense at December 31. Winters paid the next payroll at January 10 of $6,000. This payment included the accrued amount at December 31, plus $2,000 for the first few days of January.

23A. Record the adjusting entry to accrue Salaries Expense.
24A. Record the reversing entry.
25A. Journalize the cash payment.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S4A-15. MyAccountingLab

REVIEW

> Things You Should Know

1. How do we prepare financial statements?

- Financial statements are prepared from the adjusted trial balance in the following order:
  1. Income statement—reports revenues and expenses and calculates net income or net loss during the period
  2. Statement of retained earnings—shows how retained earnings changed during the period due to net income or net loss and dividends
  3. Balance sheet—reports assets, liabilities, and stockholders' equity as of the last day of the period
- A classified balance sheet classifies each asset and each liability into specific categories.

2. How could a worksheet help in preparing financial statements?

- The columns of a worksheet can be extended to help in preparing the financial statements.
- The income statement section will include only revenue and expense accounts.
- The balance sheet section will include asset and liability accounts and all equity accounts except revenues and expenses.

3. What is the closing process, and how do we close the accounts?

- The closing process consists of zeroing out all temporary accounts (revenues, expenses, Income Summary, and Dividends) in order to get the accounts ready for the next period.
- The closing process also updates the Retained Earnings account balance for net income or net loss during the period and any dividends paid to the stockholders.
- There are four steps in the closing process:

  1. Make the revenue accounts equal zero via the Income Summary account.
  2. Make the expense accounts equal zero via the Income Summary account.
  3. Make the Income Summary account equal zero via the Retained Earnings account.
  4. Make the Dividends account equal zero via the Retained Earnings account.

4. How do we prepare a post-closing trial balance?

- A post-closing trial balance is prepared after the closing entries are recorded and posted to the ledger.
- It contains only assets, liabilities, Common Stock, and Retained Earnings accounts (permanent accounts).

5. What is the accounting cycle?

- The accounting cycle is the process by which companies produce their financial statements for a specific period.
  1. Start with the beginning account balances.
  2. Analyze and journalize transactions as they occur.
  3. Post journal entries to the accounts.
  4. Compute the unadjusted balance in each account, and prepare the unadjusted trial balance.
  5. Enter the unadjusted trial balance on the worksheet, and complete the worksheet (optional).
  6. Journalize and post adjusting entries.
  7. Prepare the adjusted trial balance.
  8. Prepare the financial statements.
  9. Journalize and post the closing entries.
  10. Prepare the post-closing trial balance.

6. How do we use the current ratio to evaluate business performance?

- The current ratio measures a company's ability to pay its current liabilities with its current assets.
- Current ratio = Total current assets / Total current liabilities.

7. What are reversing entries? (Appendix 4A)

- Reversing entries are special journal entries that ease the burden of accounting for transactions in a later period.
- Reversing entries are the exact opposite of certain adjusting entries and are used only for accrual adjusting entries.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The adjusted trial balance of Martinez Advertising Services, at December 31, 2018, follows. This is the first year of operations.

MARTINEZ ADVERTISING SERVICES Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	42,000	
Accumulated Depreciation—Building		$ 24,000
Furniture	8,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Notes Payable (long-term)		7,000
Common Stock		12,000
Dividends	25,000	
Service Revenue		64,300
Salaries Expense	16,500	
Supplies Expense	800	
Depreciation Expense—Building	1,000	
Depreciation Expense—Furniture	2,000	
Advertising Expense	3,000	
Total	**$ 120,800**	**$ 120,800**

Requirements

1. Prepare the income statement for the year ended December 31, 2018 (See Learning Objective 1).
2. Prepare the statement of retained earnings for the year ended December 31, 2018 (See Learning Objective 1).
3. Prepare the classified balance sheet at December 31, 2018. Use the report form (See Learning Objective 1).
4. Calculate the current ratio at December 31, 2018 (See Learning Objective 6).
5. Journalize and post the closing entries. Indicate the balance of the Retained Earnings account after the closing entries are posted (See Learning Objective 3).
6. Prepare a post-closing trial balance at December 31, 2018 (See Learning Objective 4).

CHAPTER 4

> Solution

Requirement 1

MARTINEZ ADVERTISING SERVICES Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 64,300
Expenses:		
Salaries Expense	$ 16,500	
Advertising Expense	3,000	
Depreciation Expense—Building	1,000	
Depreciation Expense—Furniture	2,000	
Supplies Expense	800	
Total Expenses		23,300
Net Income		**$ 41,000**

Requirement 2

MARTINEZ ADVERTISING SERVICES Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 0
Net income for the year	41,000
	41,000
Dividends	(25,000)
Retained Earnings, December 31, 2018	**$ 16,000**

CHAPTER 4

Requirement 3

MARTINEZ ADVERTISING SERVICES Balance Sheet December 31, 2018			
Assets			
Current Assets:			
Cash		$ 6,000	
Accounts Receivable		6,300	
Office Supplies		200	
Total Current Assets			$ 12,500
Property, Plant, and Equipment:			
Land		10,000	
Building	$ 42,000		
Less: Accumulated Depreciation—Building	(24,000)	18,000	
Furniture	8,000		
Less: Accumulated Depreciation—Furniture	(6,000)	2,000	
Total Property, Plant, and Equipment			30,000
Total Assets			**$ 42,500**
Liabilities			
Current Liabilities:			
Accounts Payable		$ 2,000	
Salaries Payable		500	
Unearned Revenue		5,000	
Total Current Liabilities			$ 7,500
Long-term Liabilities:			
Notes Payable			7,000
Total Liabilities			14,500
Stockholders' Equity			
Common Stock		12,000	
Retained Earnings		16,000	
Total Stockholders' Equity			28,000
Total Liabilities and Stockholders' Equity			**$ 42,500**

Requirement 4

Current ratio = Total current assets / Total current liabilities = $12,500 / $7,500 = 1.67*

*rounded

Requirement 5

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	64,300	
	Income Summary		64,300
	To close revenue.		
31	Income Summary	23,300	
	Salaries Expense		16,500
	Supplies Expense		800
	Depreciation Expense—Building		1,000
	Depreciation Expense—Furniture		2,000
	Advertising Expense		3,000
	To close expenses.		
31	Income Summary	41,000	
	Retained Earnings		41,000
	To close Income Summary.		
31	Retained Earnings	25,000	
	Dividends		25,000
	To close Dividends.		

Retained Earnings

		0	Adj. Bal.
Dec. 31	25,000	41,000	Dec. 31
		16,000	Bal.

Dividends

Adj. Bal.	25,000	25,000	Dec. 31
Bal.	0		

Service Revenue

Dec. 31	64,300	64,300	Adj. Bal.
		0	Bal.

Salaries Expense

Adj. Bal.	16,500	16,500	Dec. 31
Bal.	0		

Supplies Expense

Adj. Bal.	800	800	Dec. 31
Bal.	0		

Depreciation Expense—Building

Adj. Bal.	1,000	1,000	Dec. 31
Bal.	0		

Income Summary

Dec. 31	23,300	64,300	Dec. 31
		41,000	Bal.
Dec. 31	41,000		
		0	Bal.

Depreciation Expense—Furniture

Adj. Bal.	2,000	2,000	Dec. 31
Bal.	0		

Advertising Expense

Adj. Bal.	3,000	3,000	Dec. 31
Bal.	0		

CHAPTER 4

Requirement 6

MARTINEZ ADVERTISING SERVICES Post-Closing Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	42,000	
Accumulated Depreciation—Building		$ 24,000
Furniture	8,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Notes Payable (long-term)		7,000
Common Stock		12,000
Retained Earnings		16,000
Total	$ 72,500	$ 72,500

>Key Terms

Accounting Cycle (p. 201)
Classified Balance Sheet (p. 188)
Closing Entries (p. 194)
Closing Process (p. 193)
Current Asset (p. 189)
Current Liability (p. 189)
Current Ratio (p. 203)
Income Summary (p. 194)
Intangible Asset (p. 189)
Liquidity (p. 189)
Long-term Asset (p. 189)
Long-term Investment (p. 189)
Long-term Liability (p. 189)
Operating Cycle (p. 189)
Permanent Account (p. 193)
Property, Plant, and Equipment (p. 189)
Post-Closing Trial Balance (p. 200)
Reversing Entry (p. 206) (Appendix 4A)
Temporary Account (p. 193)

> Quick Check

Learning Objective 1

1. Assets are listed on the balance sheet in the order of their
   a. purchase date.
   b. adjustments.
   c. liquidity.
   d. balance.

Learning Objective 1

2. Which of the following accounts would be included in the property, plant, and equipment category of the classified balance sheet?
   a. Land held for investment
   b. Accumulated Depreciation
   c. Office Supplies
   d. Mortgage Payable

3. Which situation indicates a net loss within the Income Statement section of the worksheet?

Learning Objective 2

a. Total credits exceed total debits
b. Total debits exceed total credits
c. Total debits equal total credits
d. None of the above

4. Which of the following accounts is *not* closed?

Learning Objective 3

a. Depreciation Expense
b. Dividends
c. Service Revenue
d. Accumulated Depreciation

5. What do closing entries accomplish?

Learning Objective 3

a. Zero out the revenues, expenses, and dividends
b. Transfer revenues, expenses, and dividends to the Retained Earnings account
c. Bring the Retained Earnings account to its correct ending balance
d. All of the above

6. Which of the following is *not* a closing entry?

Learning Objective 3

Date	Accounts and Explanation	Debit	Credit
a.	Retained Earnings	xxx	
	Dividends		xxx
b.	Service Revenue	xxx	
	Income Summary		xxx
c.	Salaries Payable	xxx	
	Income Summary		xxx
d.	Income Summary	xxx	
	Rent Expense		xxx

7. Which of the following accounts may appear on a post-closing trial balance?

Learning Objective 4

a. Cash, Salaries Payable, and Retained Earnings
b. Cash, Salaries Payable, and Service Revenue
c. Cash, Service Revenue, and Salaries Expense
d. Cash, Salaries Payable, and Salaries Expense

8. Which of the following steps of the accounting cycle is not completed at the end of the period?

Learning Objective 5

a. Journalize transactions as they occur.
b. Journalize and post the closing entries.
c. Prepare the post-closing trial balance.
d. Prepare the financial statements.

9. Clean Water Softener Systems has Cash of $600, Accounts Receivable of $900, and Office Supplies of $400. Clean owes $500 on Accounts Payable and has Salaries Payable of $200. Clean's current ratio is

Learning Objective 6

a. 2.71 **b.** 2.50 **c.** 0.63 **d.** 0.37

CHAPTER 4

Learning Objective 7
Appendix 4A

10A. Which of the following statements concerning reversing entries is true?

a. Reversing entries are required by Generally Accepted Accounting Principles.

b. Reversing entries are most often used with accrual-type adjustments.

c. Reversing entries are dated December 31, the end of the fiscal year.

d. Reversing entries are recorded before adjusting entries.

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What document are financial statements prepared from?
2. What does the income statement report?
3. What does the statement of retained earnings show?
4. What does the balance sheet report?
5. Why are financial statements prepared in a specific order? What is that order?
6. What is a classified balance sheet?
7. Identify two asset categories on the classified balance sheet, and give examples of each category.
8. Identify two liability categories on the classified balance sheet, and give examples of each category.
9. What does liquidity mean?
10. How could a worksheet help in preparing financial statements?
11. If a business had a net loss for the year, where would the net loss be reported on the worksheet?
12. What is the closing process?
13. What are temporary accounts? Are temporary accounts closed in the closing process?
14. What are permanent accounts? Are permanent accounts closed in the closing process?
15. How is the Income Summary account used? Is it a temporary or permanent account?
16. What are the steps in the closing process?
17. If a business had a net loss for the year, what would be the closing entry to close Income Summary and transfer the net loss to the Retained Earnings account?
18. What types of accounts are listed on the post-closing trial balance?
19. List the steps of the accounting cycle.
20. What is the current ratio, and how is it calculated?

21A. What are reversing entries? Are they required by GAAP?

> Short Exercises

S4-1 Preparing an income statement

Learning Objective 1

Dalton Hair Stylists's adjusted trial balance follows. Prepare Dalton's income statement for the year ended December 31, 2018.

DALTON HAIR STYLISTS Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	$ 1,300	
Accounts Receivable	1,500	
Office Supplies	1,800	
Equipment	20,900	
Accumulated Depreciation—Equipment		$ 2,200
Accounts Payable		400
Interest Payable		500
Notes Payable		3,100
Common Stock		16,150
Dividends	1,400	
Service Revenue		13,800
Rent Expense	3,900	
Supplies Expense	850	
Depreciation Expense—Equipment	2,200	
Interest Expense	2,300	
Total	$ 36,150	$ 36,150

S4-2 Preparing a statement of retained earnings

Learning Objective 1

Refer to the data in Short Exercise S4-1. Prepare Dalton's statement of retained earnings for the year ended December 31, 2018.

S4-3 Preparing a balance sheet (unclassified, account form)

Learning Objective 1

Refer to the data in Short Exercise S4-1. Prepare Dalton's *unclassified* balance sheet at December 31, 2018. Use the account form.

S4-4 Preparing a balance sheet (classified, report form)

Learning Objective 1

Refer to the data in Short Exercise S4-1. Prepare Dalton's classified balance sheet at December 31, 2018. Assume the Notes Payable is due on December 1, 2025. Use the report form.

CHAPTER 4

Learning Objective 1

S4-5 Classifying balance sheet accounts

For each account listed, identify the category in which it would appear on a classified balance sheet.

a. Office Supplies
b. Interest Payable
c. Retained Earnings
d. Copyrights
e. Land
f. Accumulated Depreciation—Furniture
g. Land (held for long-term investment purposes)
h. Unearned Revenue
i. Notes Payable (due in six years)

Learning Objective 2

S4-6 Using the worksheet to prepare financial statements

Answer the following questions:

Requirements

1. What type of normal balance does the Retained Earnings account have—debit or credit?
2. Which type of income statement account has the same type of balance as the Retained Earnings account?
3. Which type of income statement account has the opposite type of balance as the Retained Earnings account?
4. What do we call the difference between total debits and total credits on the income statement section of the worksheet?

Learning Objective 2

S4-7 Determining net income using a worksheet

A partial worksheet for Ramey Law Firm is presented below. Solve for the missing information.

	A	J	K	L	M
5		Income Statement		Balance Sheet	
6		Debit	Credit	Debit	Credit
32	Total	(a)	$ 24,850	$ 211,325	$ 202,950
33	Net (b)	8,375			(c)
34	Total	(d)	$ 24,850	(e)	(f)
35					

Learning Objective 2

S4-8 Determining net loss using a worksheet

A partial worksheet for Aaron Adjusters is presented below. Solve for the missing information.

	A	J	K	L	M
5		Income Statement		Balance Sheet	
6		Debit	Credit	Debit	Credit
32	Total	$ 22,400	(a)	(b)	$ 61,400
33	Net (c)		5,300	(d)	
34	Total	(e)	(f)	(g)	$ 61,400
35					

S4-9 Identifying temporary and permanent accounts

Learning Objective 3

For each account listed, identify whether the account is a temporary account (T) or a permanent account (P).

a. Rent Expense
b. Prepaid Rent
c. Equipment
d. Common Stock
e. Salaries Payable
f. Dividends
g. Service Revenue
h. Supplies Expense
i. Office Supplies

S4-10 Journalizing closing entries

Learning Objective 3

Brett Teddy Enterprises had the following accounts and normal balances listed on its December 31st adjusted trial balance: Service Revenue, $21,900; Salaries Expense, $6,000; Rent Expense, $4,400; Advertising Expense, $3,100; and Dividends, $6,900.

Journalize the closing entries for Teddy Enterprises.

S4-11 Posting closing entries directly to T-accounts

Learning Objective 3

The following balances appear on the books of Sarah Simmons Enterprises: Retained Earnings, $29,600; Dividends, $10,500; Income Summary, $0; Service Revenue, $24,500; Salaries Expense, $6,200; Rent Expense, $3,500; and Advertising Expense, $2,000. All accounts have normal balances.

Requirements

1. Open a T-account for each account, and insert its adjusted balance as given (denote as *Adj. Bal.*) at December 31.
2. Post the closing entries to the accounts, denoting posted amounts as *Clos.*
3. Compute the ending balance of Retained Earnings.

S4-12 Identifying accounts included on a post-closing trial balance

Learning Objective 4

For each account listed, identify whether the account would be included on a post-closing trial balance. Signify either Yes (Y) or No (N).

a. Office Supplies
b. Interest Expense
c. Retained Earnings
d. Dividends
e. Service Revenue
f. Accumulated Depreciation—Furniture
g. Rent Expense
h. Unearned Revenue
i. Accounts Payable

S4-13 Identifying steps in the accounting cycle

Learning Objective 5

Review the steps in the accounting cycle, and answer the following questions:

1. What is the first step?
2. Are any steps optional?
3. Which steps are completed throughout the period?
4. Which steps are completed only at the end of the period?
5. What is the last step in the accounting cycle?

Learning Objective 6

S4-14 Calculating the current ratio

End of the Line Montana Refrigeration has these account balances at December 31, 2018:

Notes Payable, long-term	$ 9,200	Accounts Payable	$ 3,600
Prepaid Rent	2,500	Accounts Receivable	6,600
Salaries Payable	2,600	Cash	3,500
Service Revenue	15,600	Depreciation Expense—Equip.	400
Office Supplies	1,300	Equipment	24,000
Accumulated Depreciation—Equip.	4,000	Common Stock	6,000
Advertising Expense	900	Rent Expense	1,800

Requirements

1. Calculate End of the Line Montana Refrigeration's current ratio.
2. How much in *current* assets does End of the Line Montana Refrigeration have for every dollar of *current* liabilities that it owes?

Learning Objective 7
Appendix 4A

S4A-15 Journalizing reversing entries

Ocean Breeze Associates accrued $8,500 of Service Revenue at December 31. Ocean Breeze Associates received $14,500 on January 15, including the accrued revenue recorded on December 31.

Requirements

1. Record the adjusting entry to accrue Service Revenue.
2. Record the reversing entry.
3. Journalize the cash receipt.

> Exercises

E4-16 Preparing the financial statements

Learning Objective 1

2. Ending Retained Earnings $8,200

The adjusted trial balance for Green Advertising Services is presented below:

GREEN ADVERTISING SERVICES
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 14,000	
Accounts Receivable	15,800	
Office Supplies	6,500	
Land	18,400	
Building	47,900	
Accumulated Depreciation—Building		$ 36,100
Furniture	19,600	
Accumulated Depreciation—Furniture		14,100
Accounts Payable		10,600
Salaries Payable		7,200
Unearned Revenue		16,000
Common Stock		30,000
Retained Earnings		31,400
Dividends	18,300	
Service Revenue		49,800
Salaries Expense	28,600	
Supplies Expense	8,400	
Depreciation Expense—Building	2,900	
Depreciation Expense—Furniture	1,300	
Advertising Expense	13,500	
Total	$ 195,200	$ 195,200

Requirements

1. Prepare the income statement for the year ending December 31, 2018.
2. Prepare the statement of retained earnings for the year ending December 31, 2018.
3. Prepare the classified balance sheet as of December 31, 2018. Use the report form.

E4-17 Classifying balance sheet accounts

Learning Objective 1

For each account listed, identify the category that it would appear on a classified balance sheet. Use the following categories: Current Assets; Long-term Investments; Property, Plant, and Equipment; Intangible Assets; Current Liabilities; Long-term Liabilities; and Stockholders' Equity. If the item does not belong on the classified balance sheet, put an X.

a. Land (used in operations)

b. Accumulated Depreciation—Equipment

CHAPTER 4

c. Common Stock
d. Service Revenue
e. Investment in Starbucks Corporation (to be held long-term)
f. Accounts Receivable
g. Equipment
h. Buildings
i. Notes Payable (due in 10 years)
j. Unearned Revenue
k. Cash
l. Accounts Payable
m. Prepaid Rent
n. Dividends
o. Land (held for investment purposes)
p. Depreciation Expense

Learning Objectives 1, 6

1. Total Assets $62,600

E4-18 Preparing a classified balance sheet and calculating the current ratio

The adjusted trial balance of Melanie O'Mallie Dance Studio Company follows:

MELANIE O'MALLIE DANCE STUDIO COMPANY
Trial Balance
August 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 16,000	
Office Supplies	1,800	
Prepaid Rent	1,500	
Equipment	49,000	
Accumulated Depreciation—Equipment		$ 5,700
Accounts Payable		4,800
Salaries Payable		100
Unearned Revenue		5,000
Notes Payable (long-term)		5,400
Common Stock		18,000
Retained Earnings		19,000
Dividends	1,100	
Service Revenue		18,100
Salaries Expense	3,600	
Rent Expense	1,100	
Depreciation Expense—Equipment	400	
Supplies Expense	500	
Utilities Expense	1,100	
Total	$ 76,100	$ 76,100

Requirements

1. Prepare the classified balance sheet of Melanie O'Mallie Dance Studio Company at August 31, 2018. Use the report form. You must compute the ending balance of Retained Earnings.
2. Compute O'Mallie's current ratio at August 31, 2018. One year ago, the current ratio was 1.76. Indicate whether O'Mallie's ability to pay current debts has improved, deteriorated, or remained the same.

E4-19 Preparing a worksheet

Learning Objective 2

The unadjusted trial balance of Data Solution at November 30, 2018, follows:

DATA SOLUTION
Unadjusted Trial Balance
November 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,400	
Accounts Receivable	3,100	
Prepaid Rent	1,800	
Office Supplies	3,100	
Equipment	30,200	
Accumulated Depreciation—Equipment		$ 1,500
Accounts Payable		5,100
Salaries Payable		
Common Stock		32,900
Dividends	2,900	
Service Revenue		8,800
Depreciation Expense—Equipment		
Salaries Expense	2,100	
Rent Expense		
Utilities Expense	700	
Supplies Expense		
Total	$ 48,300	$ 48,300

Additional information at November 30, 2018:

a. Accrued Service Revenue, $800.

b. Depreciation, $350.

c. Accrued Salaries Expense, $650.

d. Prepaid Rent expired, $700.

e. Office Supplies used, $550.

Requirements

1. Complete Data Solution's worksheet for the month ended November 30, 2018.
2. How much was net income for November?

Note: Exercise E4-20 should be used only after completing Exercise E4-19.

Learning Objectives 1, 2

2. Ending Retained Earnings $1,650

E4-20 Preparing financial statements from the completed worksheet

Use your answer from Exercise E4-19 to prepare Data Solution's financial statements.

Requirements

1. Complete the income statement for the month ended November 30, 2018.
2. Complete the statement of retained earnings for the month ended November 30, 2018. Assume beginning Retained Earnings was $0.
3. Complete the classified balance sheet as of November 30, 2018. Use the report form.

Learning Objective 3

E4-21 Preparing closing entries from an adjusted trial balance

The adjusted trial balance of Stone Sign Company follows:

STONE SIGN COMPANY
Adjusted Trial Balance
January 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 15,400	
Office Supplies	1,500	
Prepaid Rent	1,400	
Equipment	60,000	
Accumulated Depreciation—Equipment		$ 7,000
Accounts Payable		3,800
Salaries Payable		100
Unearned Revenue		4,200
Notes Payable (long-term)		4,300
Common Stock		48,800
Dividends	800	
Service Revenue		17,300
Salaries Expense	3,700	
Rent Expense	1,400	
Depreciation Expense—Equipment	400	
Supplies Expense	300	
Utilities Expense	600	
Total	$ 85,500	$ 85,500

Requirements

1. Assume Stone Sign Company has a January 31 year-end. Journalize Stone's closing entries at January 31.
2. How much net income or net loss did Stone Sign Company earn for the year ended January 31? How can you tell?

E4-22 Preparing closing entries from T-accounts

Learning Objective 3

Selected accounts for Kebby Photography at December 31, 2018, follow:

Retained Earnings	
	49,000

Dividends	
14,000	

Service Revenue	
	33,000
	4,500

Salaries Expense	
31,800	
1,400	

Supplies Expense	
2,700	

Depreciation Expense—Building	
7,000	

Depreciation Expense—Furniture	
1,500	

Requirements

1. Journalize Kebby Photography's closing entries at December 31, 2018.
2. Determine Kebby Photography's ending Retained Earnings balance at December 31, 2018.

E4-23 Determining the effects of closing entries on the Retained Earnings account

Learning Objective 3

McGregor Insurance Agency started the year with a beginning Retained Earnings balance of $27,500. During the year, McGregor Insurance Agency earned $34,000 of Service Revenue and incurred $23,500 of various expenses. Dividends of $12,000 from the business were paid to stockholders. After the closing entries are recorded and posted, what will be the balance of Retained Earnings?

Learning Objectives 2, 3

1. Net Income $15,350

E4-24 Preparing a worksheet and closing entries

Cynthia Elmer, CPA, had the following partial worksheet:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	CYNTHIA ELMER, CPA												
2	Worksheet												
3	December 31, 2018												
4													
5	Account Names	Unadjusted Trial Balance			Adjustments			Adjusted Trial Balance		Income Statement		Balance Sheet	
6		Debit	Credit		Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	$ 46,900						$ 46,900					
8	Accounts Receivable	9,600		(h)	$ 3,700			13,300					
9	Office Supplies	800				$ 500	(b)	300					
10	Prepaid Rent	8,000				3,300	(a)	4,700					
11	Land	35,000						35,000					
12	Building	125,000						125,000					
13	Accumulated Depreciation—Building					1,150	(c)		$ 1,150				
14	Furniture	28,000						28,000					
15	Accumulated Depreciation—Furniture					2,000	(d)		2,000				
16	Accounts Payable		$ 3,500						3,500				
17	Utilities Payable		710						710				
18	Salaries Payable					4,200	(f)		4,200				
19	Interest Payable					500	(g)		500				
20	Unearned Revenue		5,000	(e)	1,300				3,700				
21	Notes Payable		15,000						15,000				
22	Common Stock		118,000						118,000				
23	Retained Earnings		118,090						118,090				
24	Dividends	29,000						29,000					
25	Service Revenue		95,000			5,000	(e,h)		100,000				
26	Rent Expense	20,000		(a)	3,300			23,300					
27	Salaries Expense	28,000		(f)	4,200			32,200					
28	Supplies Expense			(b)	500			500					
29	Utilities Expense	25,000						25,000					
30	Depreciation Expense—Building			(c)	1,150			1,150					
31	Depreciation Expense—Furniture			(d)	2,000			2,000					
32	Interest Expense			(g)	500			500					
33	**Total**	**$ 355,300**	**$ 355,300**		**$ 16,650**	**$ 16,650**		**$ 366,850**	**$ 366,850**				
34													
35													
36													

Requirements

1. Complete the worksheet.
2. Prepare the closing entries for Cynthia Elmer, CPA.

CHAPTER 4

E4-25 Preparing closing entries from an adjusted trial balance; preparing a post-closing trial balance; and calculating the current ratio

Learning Objectives 3, 4, 6

Mark's Bowling Alley's adjusted trial balance as of December 31, 2018, is presented below:

MARK'S BOWLING ALLEY
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 20,000	
Accounts Receivable	2,900	
Office Supplies	1,150	
Prepaid Insurance	2,700	
Land	20,000	
Building	145,000	
Accumulated Depreciation—Building		$ 7,000
Equipment	43,000	
Accumulated Depreciation—Equipment		20,000
Accounts Payable		4,800
Utilities Payable		625
Salaries Payable		3,800
Unearned Revenue		1,900
Common Stock		106,000
Retained Earnings		114,250
Dividends	31,000	
Service Revenue		85,000
Insurance Expense	26,000	
Salaries Expense	28,000	
Supplies Expense	1,300	
Utilities Expense	15,000	
Depreciation Expense—Equipment	7,000	
Depreciation Expense—Building	325	
Total	$ 343,375	$ 343,375

Requirements

1. Prepare the closing entries for Mark's Bowling Alley.
2. Prepare a post-closing trial balance.
3. Compute the current ratio for Mark's Bowling Alley.

CHAPTER 4

Learning Objectives 2, 3, 4

1. Net Loss $(12,150)

E4-26 Preparing a worksheet, closing entries, and a post-closing trial balance

Houston Veterinary Hospital completed the following worksheet as of December 31, 2018.

HOUSTON VETERINARY HOSPITAL
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance			Adjustments			Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit		Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 31,200						$ 31,200					
Accounts Receivable	8,700		(f)	$ 1,400			10,100					
Office Supplies	1,500				$ 275	(b)	1,225					
Prepaid Rent	6,000				600	(a)	5,400					
Equipment	27,000						27,000					
Accumulated Depreciation—Equipment					1,900	(c)		$ 1,900				
Accounts Payable		$ 3,400						3,400				
Utilities Payable		310						310				
Salaries Payable					1,075	(e)		1,075				
Unearned Revenue		13,000	(d)	1,300				11,700				
Common Stock		41,000						41,000				
Retained Earnings		55,690						55,690				
Dividends	28,000						28,000					
Service Revenue		35,000			2,700	(d,f)		37,700				
Rent Expense	23,000		(a)	600			23,600					
Salaries Expense	12,000		(e)	1,075			13,075					
Supplies Expense			(b)	275			275					
Utilities Expense	11,000						11,000					
Depreciation Expense—Equipment			(c)	1,900			1,900					
Total	**$ 148,400**	**$ 148,400**		**$ 6,550**	**$ 6,550**		**$ 152,775**	**$ 152,775**				

Requirements

1. Complete the worksheet for Houston Veterinary Hospital.
2. Prepare the closing entries.
3. Prepare a post-closing trial balance.

Learning Objective 7
Appendix 4A

E4A-27 Journalizing reversing entries

Lucas Architects recorded the following adjusting entries as of December 31:

a. Service Revenue accrued, $2,600.

b. Unearned Revenue that has been earned, $1,300.

c. Office Supplies on hand, $530. The balance of the Office Supplies account was $880.

d. Salaries owed to employees, $600.

e. One month of Prepaid Rent has expired, $3,100.

f. Depreciation on equipment, $1,075.

Journalize any necessary reversing entries for Lucas Architects.

E4A-28 Journalizing reversing entries

Learning Objective 7
Appendix 4A

Mountain View Services had the following unadjusted balances at December 31, 2018: Salaries Payable, $0; and Salaries Expense, $1,900. The following transactions have taken place at the end of 2018 and beginning of 2019:

2018	
Dec. 31	Accrued Salaries Expense at December 31, $8,000.
31	Closed the Salaries Expense account.
2019	
Jan. 1	Reversed the accrued salaries. (Requirement 3 only)
4	Paid salaries of $8,500. This payment included the Salaries Payable amount, plus $500 for the first few days of January.

Requirements

1. Open T-accounts for Salaries Payable and Salaries Expense using their unadjusted balances at December 31, 2018.
2. Journalize the entries assuming Mountain View Services does not use reversing entries. **Do not record the reversing entry on Jan. 1.** Post to the accounts.
3. Open new T-accounts for Salaries Payable and Salaries Expense using their unadjusted balances at December 31, 2018. Journalize the entries assuming Mountain View Services uses reversing entries. **Don't forget to record the reversing entry on Jan. 1.** Post to the accounts. Compare the balances on January 4, 2019 with Requirement 2 balances on January 4, 2019.

> Problems Group A

Learning Objectives 1, 3, 4

1. Net Loss $(9,500)

P4-29A Preparing financial statements including a classified balance sheet in report form, preparing and posting closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Erickson Real Estate Appraisal at June 30, 2018, follows:

ERICKSON REAL ESTATE APPRAISAL
Adjusted Trial Balance
June 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,600	
Accounts Receivable	5,300	
Office Supplies	1,500	
Prepaid Insurance	1,700	
Land	13,000	
Building	82,000	
Accumulated Depreciation—Building		$ 25,200
Accounts Payable		18,700
Interest Payable		8,500
Salaries Payable		2,400
Unearned Revenue		7,600
Notes Payable (long-term)		40,000
Common Stock		3,000
Retained Earnings		39,500
Dividends	27,300	
Service Revenue		48,100
Insurance Expense	4,400	
Salaries Expense	33,500	
Supplies Expense	300	
Interest Expense	8,500	
Utilities Expense	2,700	
Depreciation Expense—Building	8,200	
Total	$ 193,000	$ 193,000

Requirements

1. Prepare the company's income statement for the year ended June 30, 2018.
2. Prepare the company's statement of retained earnings for the year ended June 30, 2018.
3. Prepare the company's classified balance sheet in report form at June 30, 2018.
4. Journalize the closing entries.
5. Open the T-accounts using the balances from the adjusted trial balance, and post the closing entries to the T-accounts.
6. Prepare the company's post-closing trial balance at June 30, 2018.

CHAPTER 4

P4-30A Preparing financial statements including a classified balance sheet in report form, preparing closing entries, and using the current ratio to evaluate a company

Learning Objectives 1, 3, 6

2. Ending Retained Earnings $68,200

The adjusted trial balance of Boston Irrigation System at December 31, 2018, follows:

BOSTON IRRIGATION SYSTEM
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 11,800	
Accounts Receivable	46,000	
Office Supplies	29,500	
Prepaid Insurance	6,300	
Building	63,000	
Accumulated Depreciation—Building		$ 25,000
Equipment	28,000	
Accumulated Depreciation—Equipment		7,700
Accounts Payable		32,100
Interest Payable		2,200
Salaries Payable		2,600
Unearned Revenue		2,100
Notes Payable (long-term)		32,700
Common Stock		12,000
Retained Earnings		21,000
Dividends	2,200	
Service Revenue		74,500
Insurance Expense	1,100	
Salaries Expense	16,400	
Supplies Expense	1,100	
Interest Expense	2,200	
Depreciation Expense—Equipment	2,500	
Depreciation Expense—Building	1,800	
Total	$ 211,900	$ 211,900

Requirements

1. Prepare the company's income statement for the year ended December 31, 2018.
2. Prepare the company's statement of retained earnings for the year ended December 31, 2018.
3. Prepare the company's classified balance sheet in report form at December 31, 2018.
4. Journalize the closing entries for Boston Irrigation System.
5. Compute the company's current ratio at December 31, 2018. At December 31, 2017, the current ratio was 2.3. Did the company's ability to pay current debts improve or deteriorate, or did it remain the same?

CHAPTER 4

Learning Objectives 1, 2, 3

2. Total Assets $106,500

P4-31A Preparing a worksheet, financial statements, and closing entries

The *unadjusted* trial balance of Farish Investment Advisers at December 31, 2018, follows:

FARISH INVESTMENT ADVISERS Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 30,000	
Accounts Receivable	51,000	
Office Supplies	7,000	
Equipment	28,000	
Accumulated Depreciation—Equipment		$ 9,000
Accounts Payable		13,000
Salaries Payable		
Unearned Revenue		5,500
Notes Payable (long-term)		21,000
Common Stock		27,000
Retained Earnings		29,500
Dividends	29,000	
Service Revenue		93,000
Insurance Expense	2,500	
Salaries Expense	40,000	
Supplies Expense		
Interest Expense	5,500	
Rent Expense	5,000	
Depreciation Expense—Equipment		
Total	**$ 198,000**	**$ 198,000**

Adjustment data at December 31, 2018:

a. Unearned Revenue earned during the year, $800.

b. Office Supplies on hand, $4,500.

c. Depreciation for the year, $4,500.

d. Accrued Salaries Expense, $5,000.

e. Accrued Service Revenue, $6,500.

Requirements

1. Prepare a worksheet for Farish Investment Advisers at December 31, 2018.
2. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in account format.
3. Prepare closing entries.

CHAPTER 4

Learning Objectives 1, 2, 3, 4, 5, 6

5. Net Income $18,890

P4-32A Completing the accounting cycle from adjusting entries to post-closing trial balance with an optional worksheet

The *unadjusted* trial balance of Walton Anvils at December 31, 2018, and the data for the adjustments follow:

WALTON ANVILS Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 13,480	
Accounts Receivable	14,500	
Prepaid Rent	2,320	
Office Supplies	1,700	
Equipment	23,000	
Accumulated Depreciation—Equipment		$ 1,000
Accounts Payable		7,100
Salaries Payable		
Unearned Revenue		6,000
Common Stock		24,000
Retained Earnings		4,500
Dividends	4,600	
Service Revenue		19,500
Salaries Expense	2,500	
Rent Expense		
Depreciation Expense—Equipment		
Supplies Expense		
Total	$ 62,100	$ 62,100

Adjustment data:

a. Unearned Revenue still unearned at December 31, $1,800.

b. Prepaid Rent still in force at December 31, $2,100.

c. Office Supplies used, $1,500.

d. Depreciation, $390.

e. Accrued Salaries Expense at December 31, $200.

Requirements

1. Open the T-accounts using the balances in the unadjusted trial balance.
2. Complete the worksheet for the year ended December 31, 2018 (optional).
3. Prepare the adjusting entries, and post to the accounts.
4. Prepare an adjusted trial balance.
5. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.

CHAPTER 4

6. Prepare the closing entries, and post to the accounts.
7. Prepare a post-closing trial balance.
8. Calculate the current ratio for the company.

Learning Objectives 1, 2, 3, 4, 5

6. Ending Retained Earnings $5,095

P4-33A Completing the accounting cycle from journal entries to post-closing trial balance with an optional worksheet

On December 1, Bob Waldo began an auto repair shop, Waldo's Quality Automotive. The following transactions occurred during December:

Dec. 1	Waldo contributed $70,000 cash to the business in exchange for shares of common stock.
1	Purchased $12,000 of equipment paying cash.
1	Paid $1,750 for a five-month insurance policy starting on December 1.
9	Paid $20,000 cash to purchase land to be used in operations.
10	Purchased office supplies on account, $2,800.
19	Borrowed $15,000 from the bank for business use. Waldo signed a note payable to the bank in the name of the corporation. The note is due in five years.
22	Paid $1,300 for advertising expenses.
26	Paid $900 on account.
28	The business received a bill for utilities to be paid in January, $280.
31	Revenues earned during the month included $16,000 cash and $3,600 on account.
31	Paid employees' salaries $3,800 and building rent $1,200. Record as a compound entry.
31	The business received $1,440 for auto screening services to be performed next month.
31	Paid cash dividends of $5,500 to stockholders.

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Equipment; Accumulated Depreciation—Equipment; Accounts Payable; Utilities Payable; Interest Payable; Unearned Revenue; Notes Payable; Common Stock; Retained Earnings; Dividends; Income Summary; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; Advertising Expense; Supplies Expense; Insurance Expense; Interest Expense; and Depreciation Expense—Equipment.

Adjustment data:

a. Office Supplies used during the month, $1,800.
b. Depreciation for the month, $200.
c. One month insurance has expired.
d. Accrued Interest Expense, $75.

Requirements

1. Prepare the journal entries, and post to the T-accounts.
2. Prepare an unadjusted trial balance.
3. Complete the worksheet for the month ended December 31, 2018 (optional).
4. Prepare the adjusting entries, and post to the T-accounts.
5. Prepare an adjusted trial balance.

CHAPTER 4

6. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
7. Prepare the closing entries, and post to the T-accounts.
8. Prepare a post-closing trial balance.

P4A-34A Preparing adjusting entries and reversing entries

Learning Objective 7
Appendix 4A

The unadjusted trial balance and adjustment data of Martha's Motors at December 31, 2018, follow:

MARTHA'S MOTORS
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,200	
Accounts Receivable	27,200	
Office Supplies	1,000	
Prepaid Insurance	2,400	
Equipment	52,400	
Accumulated Depreciation—Equipment		$ 34,600
Accounts Payable		15,000
Wages Payable		
Unearned Revenue		7,900
Common Stock		18,500
Dividends	3,100	
Service Revenue		17,200
Depreciation Expense—Equipment		
Wages Expense	1,600	
Insurance Expense		
Utilities Expense	1,300	
Supplies Expense		
Total	$ 93,200	$ 93,200

Adjustment data at December 31, 2018:

a. Depreciation on equipment, $2,100.
b. Accrued Wages Expense, $1,100.
c. Office Supplies on hand, $500.
d. Prepaid Insurance expired during December, $600.
e. Unearned Revenue earned during December, $4,800.
f. Accrued Service Revenue, $1,300.

2019 transactions:

a. On January 4, Martha's Motors paid wages of $1,900. Of this, $1,100 related to the accrued wages recorded on December 31.
b. On January 10, Martha's Motors received $1,500 for Service Revenue. Of this, $1,300 is related to the accrued Service Revenue recorded on December 31.

CHAPTER 4

Requirements

1. Journalize adjusting entries.
2. Journalize reversing entries for the appropriate adjusting entries.
3. Refer to the 2019 data. Journalize the cash payment and the cash receipt that occurred in 2019.

> Problems Group B

Learning Objectives 1, 3, 4

1. Net Loss $(6,600)

P4-35B Preparing financial statements including a classified balance sheet in report form, preparing and posting closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Rocket Real Estate Appraisal at June 30, 2018, follows:

ROCKET REAL ESTATE APPRAISAL Adjusted Trial Balance June 30, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 5,000	
Accounts Receivable	5,500	
Office Supplies	1,600	
Prepaid Insurance	1,700	
Land	12,800	
Building	71,000	
Accumulated Depreciation—Building		$ 25,200
Accounts Payable		18,700
Interest Payable		8,000
Salaries Payable		2,100
Unearned Revenue		1,000
Notes Payable (long-term)		37,000
Common Stock		5,000
Retained Earnings		33,000
Dividends	25,800	
Service Revenue		48,100
Insurance Expense	4,100	
Salaries Expense	32,000	
Supplies Expense	600	
Interest Expense	8,000	
Utilities Expense	2,900	
Depreciation Expense—Building	7,100	
Total	$ 178,100	$ 178,100

CHAPTER 4

Requirements

1. Prepare the company's income statement for the year ended June 30, 2018.
2. Prepare the company's statement of retained earnings for the year ended June 30, 2018.
3. Prepare the company's classified balance sheet in report form at June 30, 2018.
4. Journalize the closing entries.
5. Open the T-accounts using the balances from the adjusted trial balance, and post the closing entries to the T-accounts.
6. Prepare the company's post-closing trial balance at June 30, 2018.

P4-36B Preparing financial statements including a classified balance sheet in report form, preparing closing entries, and using the current ratio to evaluate a company

Learning Objectives 1, 3, 6

2. Ending Retained Earnings $60,200

The adjusted trial balance of Bradley Irrigation System at December 31, 2018, follows:

BRADLEY IRRIGATION SYSTEM
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 12,000	
Accounts Receivable	51,000	
Office Supplies	28,300	
Prepaid Insurance	4,700	
Building	57,300	
Accumulated Depreciation—Building		$ 25,300
Equipment	21,000	
Accumulated Depreciation—Equipment		6,800
Accounts Payable		40,700
Interest Payable		2,000
Salaries Payable		3,500
Unearned Revenue		1,800
Notes Payable (long-term)		21,000
Common Stock		13,000
Retained Earnings		32,000
Dividends	3,200	
Service Revenue		56,000
Insurance Expense	1,200	
Salaries Expense	16,200	
Supplies Expense	1,400	
Interest Expense	2,000	
Depreciation Expense—Building	1,200	
Depreciation Expense—Equipment	2,600	
Total	$ 202,100	$ 202,100

Requirements

1. Prepare the company's income statement for the year ended December 31, 2018.
2. Prepare the company's statement of retained earnings for the year ended December 31, 2018.
3. Prepare the company's classified balance sheet in report form at December 31, 2018.
4. Journalize the closing entries for Bradley Irrigation System.
5. Compute the company's current ratio at December 31, 2018. At December 31, 2017, the current ratio was 1.7. Did the company's ability to pay current debts improve or deteriorate, or did it remain the same?

Learning Objectives 1, 2, 3

2. Total Assets $92,000

P4-37B Preparing a worksheet, financial statements, and closing entries

The *unadjusted* trial balance of Fleming Investment Advisers at December 31, 2018, follows:

FLEMING INVESTMENT ADVISERS
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 25,000	
Accounts Receivable	51,000	
Office Supplies	7,500	
Equipment	26,000	
Accumulated Depreciation—Equipment		$ 19,000
Accounts Payable		14,000
Salaries Payable		
Unearned Revenue		4,500
Notes Payable (long-term)		26,000
Common Stock		15,000
Retained Earnings		5,500
Dividends	28,000	
Service Revenue		99,000
Insurance Expense	2,500	
Salaries Expense	33,000	
Supplies Expense		
Interest Expense	3,000	
Rent Expense	7,000	
Depreciation Expense—Equipment		
Total	$ 183,000	$ 183,000

Adjustment data at December 31, 2018:

a. Unearned Revenue earned during the year, $700.
b. Office Supplies on hand, $3,000.
c. Depreciation for the year, $3,000.
d. Accrued Salaries Expense, $4,500.
e. Accrued Service Revenue, $9,000.

Requirements

1. Prepare a worksheet for Fleming Investment Advisers at December 31, 2018.
2. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in account format.
3. Prepare closing entries.

P4-38B Completing the accounting cycle from adjusting entries to post-closing trial balance with an optional worksheet

Learning Objectives 1, 2, 3, 4, 5, 6

5. Net Income $17,380

The *unadjusted* trial balance of Watson Anvils at December 31, 2018, and the data for the adjustments follow:

WATSON ANVILS Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	$ 13,560	
Accounts Receivable	17,000	
Prepaid Rent	2,140	
Office Supplies	2,800	
Equiment	30,000	
Accumulated Depreciation—Equipment		$ 11,000
Accounts Payable		7,200
Salaries Payable		
Unearned Revenue		5,600
Common Stock		12,000
Retained Earnings		17,600
Dividends	4,600	
Service Revenue		19,000
Salaries Expense	2,300	
Rent Expense		
Depreciation Expense—Equipment		
Supplies Expense		
Total	$ 72,400	$ 72,400

Adjustment data:

a. Unearned Revenue still unearned at December 31, $3,600.

b. Prepaid Rent still in force at December 31, $2,000.

c. Office Supplies used, $600.

d. Depreciation, $400.

e. Accrued Salaries Expense at December 31, $180.

Requirements

1. Open the T-accounts using the balances in the unadjusted trial balance.
2. Complete the worksheet for the year ended December 31, 2018 (optional).
3. Prepare the adjusting entries, and post to the accounts.
4. Prepare an adjusted trial balance.
5. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
6. Prepare the closing entries, and post to the accounts.
7. Prepare a post-closing trial balance.
8. Calculate the current ratio for the company.

Learning Objectives 1, 2, 3, 4, 5

6. Ending Retained Earnings $9,080

P4-39B Completing the accounting cycle from journal entries to post-closing trial balance with an optional worksheet

On December 1, Curt Wilson began an auto repair shop, Wilson's Quality Automotive. The following transactions occurred during December:

Dec. 1	Wilson contributed $63,000 cash to the business in exchange for shares of common stock.
1	Purchased $14,400 of equipment paying cash.
1	Paid $3,600 for a twelve-month insurance policy starting on December 1.
9	Paid $15,000 cash to purchase land to be used in operations.
10	Purchased office supplies on account, $2,200.
19	Borrowed $24,000 from the bank for business use. Wilson signed a notes payable to the bank in the name of the corporation. The note is due in five years.
22	Paid $2,000 for advertising expenses.
26	Paid $1,000 on account.
28	The business received a bill for utilities to be paid in January, $260.
31	Revenues earned during the month included $18,500 cash and $3,800 on account.
31	Paid employees' salaries $3,900 and building rent $800. Record as a compound entry.
31	The business received $1,380 for auto screening services to be performed next month.
31	Paid cash dividends of $5,000 to stockholders.

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Equipment; Accumulated Depreciation—Equipment; Accounts Payable; Utilities Payable; Interest Payable; Unearned Revenue; Notes Payable; Common Stock; Retained Earnings; Dividends; Income Summary; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; Advertising Expense; Supplies Expense; Insurance Expense; Interest Expense; and Depreciation Expense—Equipment.

Adjustment data:

a. Office Supplies used during the month, $600.
b. Depreciation for the month, $240.
c. One month insurance has expired.
d. Accrued Interest Expense, $120.

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Requirements

1. Prepare the journal entries, and post to the T-accounts.
2. Prepare an unadjusted trial balance.
3. Complete the worksheet for the month ended December 31, 2018 (optional).
4. Prepare the adjusting entries, and post to the T-accounts.
5. Prepare an adjusted trial balance.
6. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
7. Prepare the closing entries, and post to the T-accounts.
8. Prepare a post-closing trial balance.

P4A-40B Preparing adjusting entries and reversing entries

Learning Objective 7
Appendix 4A

The unadjusted trial balance and adjustment data of Myla's Motors at December 31, 2018, follow:

MYLA'S MOTORS
Unadjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,500	
Accounts Receivable	26,100	
Office Supplies	1,000	
Prepaid Insurance	1,500	
Equiment	50,500	
Accumulated Depreciation—Equipment		$ 35,000
Accounts Payable		13,700
Wages Payable		
Unearned Revenue		5,700
Common Stock		19,300
Dividends	4,300	
Service Revenue		17,200
Depreciation Expense—Equipment		
Wages Expense	1,200	
Insurance Expense		
Utilities Expense	1,800	
Supplies Expense		
Total	$ 90,900	$ 90,900

Adjustment data at December 31, 2018:

a. Depreciation on equipment, $1,700.
b. Accrued Wages Expense, $1,300.
c. Office Supplies on hand, $400.
d. Prepaid Insurance expired during December, $250.

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e. Unearned Revenue earned during December, $4,200.

f. Accrued Service Revenue, $1,000.

2019 transactions:

a. On January 4, Myla's Motors paid wages of $1,900. Of this, $1,300 related to the accrued wages recorded on December 31.

b. On January 10, Myla's Motors received $1,700 for Service Revenue. Of this, $1,000 related to the accrued Service Revenue recorded on December 31.

Requirements

1. Journalize adjusting entries.
2. Journalize reversing entries for the appropriate adjusting entries.
3. Refer to the 2019 data. Journalize the cash payment and the cash receipt that occurred in 2019.

CRITICAL THINKING

> Using Excel

P4-41 Using Excel to prepare financial statements, closing entries, and the post-closing trial balance

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Cedar River Corporation started operations on July 1, 2018. On July 31, a trial balance was prepared, adjusting entries were journalized and posted, and an adjusted trial balance was completed. A worksheet is to be used to help prepare the financial statements and the post-closing trial balance.

Requirements

1. Use Excel to complete the Income Statement and Balance Sheet columns of the worksheet. Carry numbers from the adjusted trial balance columns of the worksheet to the income statement and balance sheet columns using Excel formulas.
   - **a.** Use formulas to total the columns.
   - **b.** Use a formula to determine the amount of the net income or net loss.
   - **c.** Format the cells requiring dollar signs.
   - **d.** Boldface the totals.
2. Prepare the income statement, the statement of retained earnings, and a classified balance sheet.
   - **a.** Use the Increase Indent button on the Home tab to indent items.
   - **b.** Use formulas to sum items.
   - **c.** Format the cells requiring dollar signs.
   - **d.** Format the cells requiring double underlines.
3. Journalize the closing entries. The account titles are available when you click on the down-arrow. Indent the account to be credited.
4. Post the closing entries to the T-accounts. Use cell references from the closing entries.
5. Complete the post-closing trial balance using formulas referencing the T-accounts. The account titles are available when you click the down-arrow.
   - **a.** Format the cells requiring dollar signs.
   - **b.** Boldface the totals.
   - **c.** Format the cells requiring double underlines.

> Continuing Problem

P4-42 Completing the accounting cycle from adjusted trial balance to post-closing trial balance with an optional worksheet

This problem continues the Canyon Canoe Company situation from Chapter 3.

Requirements

1. Complete the worksheet at December 31, 2018 (optional). Use the unadjusted trial balance from Chapter 2 and the adjusting entries from Chapter 3.
2. Prepare an income statement for the two months ended December 31, 2018. Use the worksheet prepared in Requirement 1 or the adjusted trial balance from Chapter 3.
3. Prepare a statement of retained earnings for the two months ended December 31, 2018.
4. Prepare a classified balance sheet (report form) at December 31, 2018. Assume the note payable is long-term.
5. Journalize and post the closing entries at December 31, 2018. Open T-accounts for Income Summary and Retained earnings. Determine the ending balance for each account. Denote each closing amount as *Clos.* and each account balance as *Balance*.
6. Prepare a post-closing trial balance at December 31, 2018.

> Practice Set

P4-43 Completing the accounting cycle from adjusted trial balance to post-closing trial balance with an optional worksheet

Refer to the Practice Set data provided in Chapters 2 and 3 for Crystal Clear Cleaning.

Requirements

1. Prepare a worksheet (optional) at November 30, 2018. Use the unadjusted trial balance from Chapter 2 and the adjusting entries from Chapter 3.
2. Prepare an income statement and statement of retained earnings for the month ended November 30, 2018. Also prepare a classified balance sheet at November 30, 2018, using the report format. Assume the Notes Payable is long-term. Use the worksheet prepared in Requirement 1 or the adjusted trial balance from Chapter 3.
3. Prepare closing entries at November 30, 2018, and post to the accounts. Open T-accounts for Income Summary and Retained earnings. Determine the ending balance in each account. Denote each closing amount as *Clos.* and each account balance as *Balance*.
4. Prepare a post-closing trial balance at November 30, 2018.

COMPREHENSIVE PROBLEMS

> Comprehensive Problem 1 for Chapters 1–4

Murphy Delivery Service completed the following transactions during December 2018:

Dec. 1	Murphy Delivery Service began operations by receiving $13,000 cash and a truck with a fair value of $9,000 from Russ Murphy. The business issued Murphy shares of common stock in exchange for this contribution.
1	Paid $600 cash for a six-month insurance policy. The policy begins December 1.
4	Paid $750 cash for office supplies.
12	Performed delivery services for a customer and received $2,200 cash.
15	Completed a large delivery job, billed the customer, $3,300, and received a promise to collect the $3,300 within one week.
18	Paid employee salary, $800.
20	Received $7,000 cash for performing delivery services.
22	Collected $2,200 in advance for delivery service to be performed later.
25	Collected $3,300 cash from customer on account.
27	Purchased fuel for the truck, paying $150 on account. (Credit Accounts Payable)
28	Performed delivery services on account, $1,400.
29	Paid office rent, $1,400, for the month of December.
30	Paid $150 on account.
31	Cash dividends of $2,500 were paid to stockholders.

Requirements

1. Record each transaction in the journal using the following chart of accounts. Explanations are not required.

Cash	Retained Earnings
Accounts Receivable	Dividends
Office Supplies	Income Summary
Prepaid Insurance	Service Revenue
Truck	Salaries Expense
Accumulated Depreciation—Truck	Depreciation Expense—Truck
Accounts Payable	Insurance Expense
Salaries Payable	Fuel Expense
Unearned Revenue	Rent Expense
Common Stock	Supplies Expense

2. Post the transactions in the T-accounts.
3. Prepare an unadjusted trial balance as of December 31, 2018.
4. Prepare a worksheet as of December 31, 2018 (optional).
5. Journalize the adjusting entries using the following adjustment data and also by reviewing the journal entries prepared in Requirement 1. Post adjusting entries to the T-accounts.

Adjustment data:

a. Accrued Salaries Expense, $800.

b. Depreciation was recorded on the truck using the straight-line method. Assume a useful life of five years and a salvage value of $3,000.

c. Prepaid Insurance for the month has expired.

d. Office Supplies on hand, $450.

e. Unearned Revenue earned during the month, $700.

f. Accrued Service Revenue, $450.

6. Prepare an adjusted trial balance as of December 31, 2018.

7. Prepare Murphy Delivery Service's income statement and statement of retained earnings for the month ended December 31, 2018, and the classified balance sheet on that date. On the income statement, list expenses in decreasing order by amount—that is, the largest expense first, the smallest expense last.

8. Journalize the closing entries, and post to the T-accounts.

9. Prepare a post-closing trial balance as of December 31, 2018.

> Comprehensive Problem 2 for Chapters 1–4

This comprehensive problem is a continuation of Comprehensive Problem 1. Murphy Delivery Service has completed closing entries and the accounting cycle for 2018. The business is now ready to record January 2019 transactions.

Jan. 3	Collected $200 cash from customer on account.
5	Purchased office supplies on account, $1,000.
12	Performed delivery services for a customer and received $3,000 cash.
15	Paid employee salary, including the amount owed on December 31, $4,100.
18	Performed delivery services on account, $1,350.
20	Paid $300 on account.
24	Purchased fuel for the truck, paying $200 cash.
27	Completed the remaining work due for Unearned Revenue.
28	Paid office rent, $2,200, for the month of January.
30	Collected $3,000 in advance for delivery service to be performed later.
31	Cash dividends of $1,500 were paid to stockholders.

Requirements

1. Record each January transaction in the journal. Explanations are not required.

2. Post the transactions in the T-accounts. Don't forget to use the December 31, 2018, ending balances as appropriate.

3. Prepare an unadjusted trial balance as of January 31, 2019.

4. Prepare a worksheet as of January 31, 2019 (optional).

5. Journalize the adjusting entries using the following adjustment data and also by reviewing the journal entries prepared in Requirement 1. Post adjusting entries to the T-accounts.

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Adjustment data:

a. Office Supplies on hand, $600.

b. Accrued Service Revenue, $1,800.

c. Accrued Salaries Expense, $500.

d. Prepaid Insurance for the month has expired.

e. Depreciation was recorded on the truck for the month.

6. Prepare an adjusted trial balance as of January 31, 2019.

7. Prepare Murphy Delivery Service's income statement and statement of retained earnings for the month ended January 31, 2019, and the classified balance sheet on that date. On the income statement, list expenses in decreasing order by amount—that is, the largest expense first, the smallest expense last.

8. Calculate the following ratios as of January 31, 2019, for Murphy Delivery Service: return on assets, debt ratio, and current ratio.

> Tying It All Together 4-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Hyatt Hotels Corporation's 2015 annual report (https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm).

Hyatt Hotels Corporation is headquartered in Chicago and is a leading global hospitality company. The company develops, owns, and operates hotels, resorts, and vacation ownership properties in 52 different countries. For the year ended December 31, 2015, Hyatt Hotels reported the following select account information (in millions):

Revenue	$ 4,328
Selling, general, and administrative expense	4,005
Other Expenses	61
Interest Expense	68
Income Tax Expense	70
Dividends	0
Retained Earnings, December 31, 2014	2,165

Requirements

1. Journalize Hyatt Hotels Corporation's closing entries at December 31, 2015.

2. Determine Hyatt Hotels Corporation's ending Retained Earnings balance at December 31, 2015.

3. Review the Hyatt Hotels Corporation's balance sheet included in the 2015 annual report and find ending Retained Earnings, December 31, 2015. Does your ending Retained Earnings calculated in Requirement 2 match?

> Ethical Issue 4-1

Grant Film Productions wishes to expand and has borrowed $100,000. As a condition for making this loan, the bank requires that the business maintain a current ratio of at least 1.50.

Business has been good but not great. Expansion costs have brought the current ratio down to 1.40 on December 15. Rita Grant, owner of the business, is considering what might happen if she reports a current ratio of 1.40 to the bank. One course of action for Grant is to record in December $10,000 of revenue that the business will earn in January of next year. The contract for this job has been signed.

Requirements

1. Journalize the revenue transaction, and indicate how recording this revenue in December would affect the current ratio.
2. Discuss whether it is ethical to record the revenue transaction in December. Identify the accounting principle relevant to this situation, and give the reasons underlying your conclusion.

> Financial Statement Case 4-1

This case, based on the balance sheet of **Target Corporation**, will familiarize you with some of the assets and liabilities of that company. Visit http://www.pearsonhighered.com/Horngren to view a link to Target Corporation's Fiscal 2015 Annual Report. Use the Target Corporation balance sheet to answer the following questions.

Requirements

1. Which balance sheet format does Target use?
2. Name the company's largest current asset and largest current liability at January 30, 2016.
3. Compute Target's current ratios at January 30, 2016, and January 31, 2015. Did the current ratio improve, worsen, or hold steady?
4. Under what category does Target report furniture, fixtures, and equipment?
5. What was the cost of the company's property, plant, and equipment at January 30, 2016? What was the amount of accumulated depreciation? What was the book value of the property, plant, and equipment?

> Team Project 4-1

Kathy Wintz formed a lawn service business as a summer job. To start the corporation on May 1, 2018, she deposited $1,000 in a new bank account in the name of the business. The $1,000 consisted of a $600 loan from Bank One to her company, Wintz Lawn Service, and $400 of her own money. The company issued $400 of common stock to Wintz. Wintz rented lawn equipment, purchased supplies, and hired other students to mow and trim customers' lawns.

At the end of each month, Wintz mailed bills to the customers. On August 31, she was ready to dissolve the corporation and return to college. Because she was so busy, she kept few records other than the checkbook and a list of receivables from customers.

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At August 31, the business's checkbook shows a balance of $2,000, and customers still owe $750. During the summer, the business collected $5,500 from customers. The business checkbook lists payments for supplies totaling $400, and it still has gasoline, weed trimmer cord, and other supplies that cost a total of $50. The business paid employees $1,800 and still owes them $300 for the final week of the summer.

Wintz rented some equipment from Ludwig's Machine Shop. On May 1, the business signed a six-month rental agreement on mowers and paid $600 for the full rental period in advance. Ludwig's will refund the unused portion of the prepayment if the equipment is returned in good shape. In order to get the refund, Wintz has kept the mowers in excellent condition. In fact, the business had to pay $300 to repair a mower.

To transport employees and equipment to jobs, Wintz used a trailer that the business bought for $300. The business estimates that the summer's work used up one-third of the trailer's service potential. The business checkbook lists a payment of $500 for cash dividends paid during the summer. The business paid the loan back during August. (For simplicity, ignore any interest expense associated with the loan.)

Requirements

1. As a team, prepare the income statement and the statement of retained earnings of Wintz Lawn Service for the four months May 1 through August 31, 2018.
2. Prepare the classified balance sheet (report form) of Wintz Lawn Service at August 31, 2018.
3. Was Wintz's summer work successful? Give your team's reason for your answer.

> Quick Check Answers

1. c **2.** b **3.** b **4.** d **5.** d **6.** c **7.** a **8.** a **9.** a **10A.** b

Chapter 4
Completing the Accounting Cycle

Review Questions

1. The financial statements are prepared from the adjusted trial balance or worksheet.

2. The income statement reports revenues and expenses and calculates net income or net loss for the time period.

3. The statement of retained earnings shows how retained earnings changed during the period due to net income (or net loss) and dividends.

4. The balance sheet reports assets, liabilities, and stockholders’ equity as of the last day of the period.

5. The financial statements are prepared in a specific order because net income from the income statement is used on the statement of retained earrings to determine ending retained earnings. Ending retained earnings is then transferred to the balance sheet to determine total stockholders’ equity. The income statement is prepared first, then the statement of retained earnings, and then the balance sheet.

6. In a classified balance sheet, each asset and each liability is classified into specific categories. Assets are classified as current assets; long-term investments; property, plant, and equipment; and intangible assets. Liabilities are classified as either current or long-term liabilities.

7. Current: Cash, Accounts Receivable, Office Supplies. Property, Plant, and Equipment: Equipment, Land, Buildings.

8. Current: Accounts Payable, Salaries Payable, Interest Payable. Long-term: Mortgage Payable, Notes Payable.

9. Liquidity measures how quickly and easily an account can be converted to cash, because cash is the most liquid asset.

10. The worksheet contains columns for the income statement and the balance sheet and calculates net income.

11. The net loss amount should be entered in the *credit* column of the income statement (to balance out) and in the *debit* column of the balance sheet (to balance out).

12. Closing the books (often referred to as the closing process) consists of journalizing and posting the closing entries in order to get the accounts ready for the next period. The closing process zeroes out all revenue accounts and all expense accounts in order to measure each period's net income separately from all other periods. The closing process also zeroes out the dividends account. In addition, the closing process updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to stockholders.

13. Temporary accounts (also known as nominal accounts) are accounts that relate to a particular accounting period and are closed at the end of that period. All temporary accounts (dividends, revenues, Income Summary and expenses) are closed (zeroed).

14. The permanent accounts (also known as real accounts)—the assets, liabilities, common stock and retained earnings—are not closed at the end of the period. Permanent account balances are carried forward into the next time period. All accounts on the balance sheet are permanent accounts.

15. The Income Summary account summarizes the net income (or net loss) for the period by collecting the sum of all the expenses (a debit) and the sum of all the revenues (a credit). The Income Summary account is like a temporary "holding tank" that shows the amount of net income or net loss of the current period. Its balance—net income or net loss—is then transferred (closed) to the Retained Earnings account (the final account in the closing process). Income Summary is a temporary account.

16. Step 1: Make the revenue accounts equal zero via the Income Summary account. This closing entry transfers total revenues to the credit side of the Income Summary account.
Step 2: Make expense accounts equal zero via the Income Summary account. This closing entry transfers total expenses to the debit side of the Income Summary account.
Step 3: Make the Income Summary account equal zero via the Retained Earnings account. This closing entry transfers net income (or net loss) to the Retained Earnings account.
Step 4: Make the Dividends account equal zero via the Retained Earnings account. This entry transfers the dividends to the debit side of the Retained Earnings account.

17. If a business has a net loss, the closing entry to close Income Summary would be a debit to Retained Earnings and a credit to Income Summary.

18. Only assets, liabilities, and stockholders' equity accounts including the Common Stock and Retained Earnings accounts (permanent accounts) appear on the post-closing trial balance.

19. The steps of the accounting cycle are:
Step 1. Start with beginning account balances.
Step 2. Analyze and journalize transactions as they occur.
Step 3. Post journal entries to the accounts.
Step 4. Compute the unadjusted balance in each account and prepare the unadjusted trial balance.
Step 5. Enter the unadjusted trial balance on the worksheet and complete the worksheet (optional).
Step 6. Journalize and post adjusting entries.
Step 7. Prepare the adjusted trial balance.
Step 8. Prepare the financial statements.
Step 9. Journalize and post the closing entries.
Step 10. Prepare the post-closing trial balance.

20. The current ratio measures a company's ability to pay its current liabilities with its current assets. This ratio is computed as follows: Current ratio = Total current assets / Total current liabilities.

21A. Reversing entries are special journal entries that ease the burden of accounting for transactions in a later period. Reversing entries are the exact opposite of certain adjusting entries. Reversing entries are used in conjunction with accrual-type adjustments, such as accrued salaries expense and accrued service revenue. Generally Accepted Accounting Principles do not require reversing entries.

Short Exercises

S4-1

DALTON HAIR STYLISTS
Income Statement
Year Ended December 31, 2018

Revenues:		
Service Revenue		$ 13,800
Expenses:		
Rent Expense	$ 3,900	
Interest Expense	2,300	
Depreciation Expense—Equipment	2,200	
Supplies Expense	850	
Total Expenses		9,250
Net Income		$ 4,550

S4-2

DALTON HAIR STYLISTS
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 0
Net income for the year	4,550
	4,550
Dividends	(1,400)
Retained Earnings, December 31, 2018	$ 3,150

S4-3

DALTON HAIR STYLISTS
Balance Sheet
December 31, 2018

Assets			Liabilities	
Cash		$ 1,300	Accounts Payable	$ 400
Accounts Receivable		1,500	Interest Payable	500
Office Supplies		1,800	Notes Payable	3,100
Equipment	$ 20,900		Total Liabilities	4,000
Less: Acc. Depr.—Equip.	(2,200)	18,700		
			Stockholders' Equity	
			Common Stock	16,150
			Retained Earnings	3,150
			Total Stockholders' Equity	19,300
Total Assets		$ 23,300	Total Liabilities and Stockholders' Equity	$ 23,300

S4-4

DALTON HAIR STYLISTS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 1,300	
Accounts Receivable	1,500	
Office Supplies	1,800	
Total Current Assets		$ 4,600
Property, Plant, and Equipment:		
Equipment	$ 20,900	
Less: Accumulated Depreciation—Equipment	(2,200)	
Total Property, Plant, and Equipment		18,700
Total Assets		$ 23,300
Liabilities		
Current Liabilities:		
Accounts Payable	$ 400	
Interest Payable	500	
Total Current Liabilities		$ 900
Long-term Liabilities:		
Notes Payable (long-term)		3,100
Total Liabilities		4,000
Stockholders' Equity		
Common Stock	$ 16,150	
Retained Earnings	3,150	
Total Stockholders' Equity		19,300
Total Liabilities and Stockholders' Equity		$ 23,300

S4-5

a. current assets
b. current liabilities
c. stockholders' equity
d. intangible assets
e. property, plant and equipment
f. property, plant, and equipment
g. long-term investments
h. current liabilities
i. long-term liabilities

S4-6

1. Credit
2. Revenue
3. Expense
4. Net Income or Net Loss

S4-7

a. $16,475 ($24,850 – $8,375)
b. Income
c. $8,375
d. $24,850 ($16,475 + $8,375)
e. $211,325
f. $211,325 ($202,950 + $8,375)

S4-8

a. $17,100 ($22,400 – $5,300)
b. $56,100 ($61,400 – $5,300)
c. Loss
d. $5,300
e. $22,400
f. $22,400 ($17,100 + $5,300)
g. $61,400 ($56,100 + $5,300)

S4-9

a. T
b. P
c. P
d. P
e. P
f. T
g. T
h. T
i. P

S4-10

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	21,900	
	Income Summary		21,900
	To close revenue.		
31	Income Summary	13,500	
	Salaries Expense		6,000
	Rent Expense		4,400
	Advertising Expense		3,100
	To close expenses.		
31	Income Summary	8,400	
	Retained Earnings		8,400
	To close Income Summary.		
31	Retained Earnings	6,900	
	Dividends		6,900
	To close dividends.		

S4-11
Requirements 1 and 2

Retained Earnings

		29,600	Adj. Bal.
Clos.	10,500	12,800	Clos.
		31,900	Bal.

Dividends

Adj. Bal.	10,500		
		10,500	Clos.
Bal.	0		

Service Revenue

		24,500	Adj. Bal.
Clos.	24,500		
		0	Bal.

Salaries Expense

Adj.Bal.	6,200		
		6,200	Clos.
Bal.	0		

Rent Expense

Adj.Bal.	3,500		
		3,500	Clos.
Bal.	0		

Advertising Expense

Adj.Bal.	2,000		
		2,000	Clos.
Bal.	0		

S4-11, cont.
Requirements 1 and 2, cont.

Income Summary			
Clos.	11,700	24,500	Clos.
		12,800	Bal.
Clos.	12,800		
		0	Bal.

Requirement 3
Ending balance of Retained Earnings: $31,900

S4-12

a. Y
b. N
c. Y
d. N
e. N
f. Y
g. N
h. Y
i. Y

S4-13

1. Start with beginning account balances.
2. Yes, completing the worksheet is optional.
3. Journalizing the transactions and posting to the accounts.
4. Preparing worksheet (optional), adjusting the accounts, preparing the financial statements, and closing the accounts.
5. Prepare the post-closing trial balance.

S4-14
Requirement 1

Current ratio = Total current assets / Total current liabilities
= ($2,500 + $1,300 + $6,600 + $3,500) / ($2,600 + $3,600)
= $13,900 / $6,200 = 2.24

Requirement 2

End of the Line Montana Refrigeration has $2.24 in current asssets for every $1.00 of current liabilities that it owes.

S4A-15
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Accounts Receivable	8,500	
	Service Revenue		8,500
	To accrue service revenue.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Service Revenue	8,500	
	Accounts Receivable		8,500
	To reverse the revenue adjusting entry.		

S4A-15, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Cash	14,500	
	Service Revenue		14,500
	To record receipt of revenue.		

Exercises

E4-16
Requirement 1

GREEN ADVERTISING SERVICES
Income Statement
Year Ended December 31, 2018

Revenues:		
Service Revenue		$ 49,800
Expenses:		
Salaries Expense	$ 28,600	
Advertising Expense	13,500	
Supplies Expense	8,400	
Depreciation Expense—Building	2,900	
Depreciation Expense—Furniture	1,300	
Total Expenses		54,700
Net Loss		$ (4,900)

Requirement 2

GREEN ADVERTISING SERVICES
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 31,400
Net loss for the year	(4,900)
	26,500
Dividends	(18,300)
Retained Earnings, December 31, 2018	$ 8,200

E4-16, cont.
Requirement 3

GREEN ADVERTISING SERVICES Balance Sheet December 31, 2018			
Assets			
Current Assets:			
Cash		$ 14,000	
Accounts Receivable		15,800	
Office Supplies		6,500	
Total Current Assets			$ 36,300
Property, Plant and Equipment:			
Land		18,400	
Building	$ 47,900		
Less: Accumulated Depreciation—Building	(36,100)	11,800	
Furniture	19,600		
Less: Accumulated Depreciation—Furniture	(14,100)	5,500	
Total Property, Plant, and Equipment			35,700
Total Assets			$ 72,000
Liabilities			
Current Liabilities:			
Accounts Payable		$ 10,600	
Salaries Payable		7,200	
Unearned Revenue		16,000	
Total Current Liabilities			$ 33,800
Stockholders' Equity			
Common Stock		30,000	
Retained Earnings		8,200	
Total Stockholders' Equity			38,200
Total Liabilities and Stockholders' Equity			$ 72,000

E4-17

a.	Property, Plant, and Equipment	i.	Long-Term Liabilities
b.	Property, Plant, and Equipment	j.	Current Liabilities
c.	Stockholders' Equity	k.	Current Assets
d.	X	l.	Current Liabilities
e.	Long-Term Investments	m.	Current Assets
f.	Current Assets	n.	X
g.	Property, Plant, and Equipment	o.	Long-Term Investments
h.	Property, Plant, and Equipment	p.	X

E4-18
Requirement 1

MELANIE O'MALLIE DANCE STUDIO COMPANY		
Balance Sheet		
August 31, 2018		
Assets		
Current Assets:		
Cash	$ 16,000	
Office Supplies	1,800	
Prepaid Rent	1,500	
Total Current Assets		$ 19,300
Property, Plant, and Equipment:		
Equipment	49,000	
Less: Accumulated Depreciation—Equipment	(5,700)	
Total Property, Plant, and Equipment		43,300
Total Assets		$ 62,600
Liabilities		
Current Liabilities:		
Accounts Payable	$ 4,800	
Salaries Payable	100	
Unearned Revenue	5,000	
Total Current Liabilities		$ 9,900
Long-term Liabilities:		
Notes Payable (long-term)		5,400
Total Liabilities		15,300
Stockholders' Equity		
Common Stock	18,000	
Retained Earnings	29,300	
Total Stockholders' Equity		47,300
Total Liabilities and Stockholders' Equity		$ 62,600

Calculation of Retained Earnings = $19,000 − $1,100 + $18,100 − $3,600 − $1,100 − $400 − $500 − $1,100 = $29,300

Requirement 2

Current ratio = Total current assets / Total current liabilities
= $19,300 / $9,900 = 1.95

O'Mallie's abililty to pay current debts has improved.

E4-19
Requirement 1

DATA SOLUTION
Worksheet
November 30, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 4,400				$ 4,400				$ 4,400	
Accounts Receivable	3,100		a. $ 800		3,900				3,900	
Prepaid Rent	1,800			$ 700 d.	1,100				1,100	
Office Supplies	3,100			550 e.	2,550				2,550	
Equipment	30,200				30,200				30,200	
Acc. Depr. —Equip.		$ 1,500		350 b.		$ 1,850				$ 1,850
Accounts Payable		5,100				5,100				5,100
Salaries Payable				650 c.		650				650
Common Stock		32,900				32,900				32,900
Dividends	2,900				2,900				2,900	
Service Revenue		8,800		800 a.		9,600		$ 9,600		
Depr. Expense—Equip.			b. 350		350		$ 350			
Salaries Expense	2,100		c. 650		2,750		2,750			
Rent Expense			d. 700		700		700			
Utilities Expense	700				700		700			
Supplies Expense			e. 550		550		550			
Total	$ 48,300	$ 48,300	$ 3,050	$ 3,050	$ 50,100	$ 50,100	$ 5,050	$ 9,600	$ 45,050	$ 40,500
						Net Income	4,550			4,550
Total							$ 9,600	$ 9,600	$ 45,050	$ 45,050

E4-19, cont.
Requirement 2
Net income for November was $4,550.

E4-20
Requirement 1

DATA SOLUTION
Income Statement
Month Ended November 30, 2018

Revenues:		
Service Revenue		$ 9,600
Expenses:		
Salaries Expense	$ 2,750	
Utilities Expense	700	
Rent Expense	700	
Depreciation Expense—Equipment	350	
Supplies Expense	550	
Total Expenses		5,050
Net Income		$ 4,550

Requirement 2

DATA SOLUTION
Statement of Retained Earnings
Month Ended November 30, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the month	4,550
	4,550
Dividends	(2,900)
Retained Earnings, November 30, 2018	$ 1,650

E4-20, cont.
Requirement 3

DATA SOLUTION
Balance Sheet
November 30, 2018

Assets		
Current Assets:		
Cash	$ 4,400	
Accounts Receivable	3,900	
Prepaid Rent	1,100	
Office Supplies	2,550	
Total Current Assets		$ 11,950
Property, Plant, and Equipment:		
Equipment	30,200	
Less: Accumulated Depreciation—Equipment	(1,850)	
Total Property, Plant, and Equipment		28,350
Total Assets		$ 40,300
Liabilities		
Current Liabilities:		
Accounts Payable	$ 5,100	
Salaries Payable	650	
Total Liabilities		$ 5,750
Stockholders' Equity		
Common Stock	32,900	
Retained Earnings	1,650	
Total Stockholders' Equity		34,550
Total Liabilities and Stockholders' Equity		$ 40,300

E4-21
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 31	Service Revenue	17,300	
	Income Summary		17,300
	To close revenue.		
31	Income Summary	6,400	
	Salaries Expense		3,700
	Rent Expense		1,400
	Depreciation Expense—Equipment		400
	Supplies Expense		300
	Utilities Expense		600
	To close expenses.		
31	Income Summary	10,900	
	Retained Earnings		10,900
	To close Income Summary.		
31	Retained Earnings	800	
	Dividends		800
	To close dividends.		

Requirement 2
Stone Sign Company earned net income of $10,900 ($17,300 − $6,400) for the year. We know this because revenues exceeded expenses by that amount and that was the balance in Income Summary when it was closed.

E4-22
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	37,500	
	Income Summary		37,500
	To close revenue.		
31	Income Summary	44,400	
	Salaries Expense		33,200
	Supplies Expense		2,700
	Depreciation Expense—Building		7,000
	Depreciation Expense—Furniture		1,500
	To close expenses.		
31	Retained Earnings	6,900	
	Income Summary		6,900
	To close Income Summary.		
31	Retained Earnings	14,000	
	Dividends		14,000
	To close dividends.		

Requirement 2

Retained Earnings

Clos.	6,900	49,000	Bal.
Clos.	14,000		
		28,100	Bal.

E4-23

Retained Earnings

Clos.	12,000	27,500	Bal.
		10,500*	Clos.
		26,000	Bal.

* $34,000 − $23,500 = $10,500 (Net income). The balance in Retained Earnings will be $26,000.

E4-24
Requirement 1

CYNTHIA ELMER, CPA
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 46,900				$ 46,900				$ 46,900	
Accounts Receivable	9,600		h. $ 3,700		13,300				13,300	
Office Supplies	800			$ 500 b.	300				300	
Prepaid Rent	8,000			3,300 a.	4,700				4,700	
Land	35,000				35,000				35,000	
Building	125,000				125,000				125,000	
Acc. Dep.—Building				1,150 c.		$ 1,150				$ 1,150
Furniture	28,000				28,000				28,000	
Acc. Dep.—Furniture				2,000 d.		2,000				2,000
Accounts Payable		$ 3,500				3,500				3,500
Utilities Payable		710				710				710
Salaries Payable				4,200 f.		4,200				4,200
Interest Payable				500 g.		500				500
Unearned Revenue		5,000	e. 1,300			3,700				3,700
Notes Payable		15,000				15,000				15,000
Common Stock		118,000				118,000				118,000
Retained Earnings		118,090				118,090				118,090
Dividends	29,000				29,000				29,000	
Service Revenue		95,000		5,000 e., h.		100,000		$ 100,000		
Rent Expense	20,000		a. 3,300		23,300		$ 23,300			
Salaries Expense	28,000		f. 4,200		32,200		32,200			
Supplies Expense			b. 500		500		500			
Utilities Expense	25,000				25,000		25,000			
Depr. Exp.—Building			c. 1,150		1,150		1,150			
Depr. Exp.—Furniture			d. 2,000		2,000		2,000			
Interest Expense			g. 500		500		500			
Total	$ 355,300	$ 355,300	$ 16,650	$ 16,650	$ 366,850	$ 366,850	$ 84,650	$ 100,000	$ 282,200	$ 266,850
						Net Income	15,350			15,350
Total							$ 100,000	$ 100,000	$ 282,200	$ 282,200

E4-24, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	100,000	
	Income Summary		100,000
	To close revenue.		
31	Income Summary	84,650	
	Rent Expense		23,300
	Salaries Expense		32,200
	Supplies Expense		500
	Utilities Expense		25,000
	Depreciation Expense—Building		1,150
	Depreciation Expense—Furniture		2,000
	Interest Expense		500
	To close expenses.		
31	Income Summary	15,350	
	Retained Earnings		15,350
	To close Income Summary.		
31	Retained Earnings	29,000	
	Dividends		29,000
	To close dividends.		

E4-25
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	85,000	
	Income Summary		85,000
	To close revenue.		
31	Income Summary	77,625	
	Insurance Expense		26,000
	Salaries Expense		28,000
	Supplies Expense		1,300
	Utilities Expense		15,000
	Depreciation Expense—Building		325
	Depreciated Expense—Equipment		7,000
	To close expenses.		
31	Income Summary	7,375	
	Retained Earnings		7,375
	To close Income Summary.		
31	Retained Earnings	31,000	
	Dividends		31,000
	To close dividends.		

E4-25, cont.
Requirement 2

MARK'S BOWLING ALLEY Post-Closing Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 20,000	
Accounts Receivable	2,900	
Office Supplies	1,150	
Prepaid Insurance	2,700	
Land	20,000	
Building	145,000	
Accumulated Depreciations—Building		$ 7,000
Equipment	43,000	
Accumulated Depreciation—Equipment		20,000
Accounts Payable		4,800
Utilities Payable		625
Salaries Payable		3,800
Unearned Revenue		1,900
Common Stock		106,000
Retained Earnings		90,625
Total	$ 234,750	$ 234,750

Requirement 3

Current Ratio = Total current assets / Total current liabilities
= ($20,000 + $2,900 + $1,150 + $2,700) / ($4,800 + $625 + $3,800 + $1,900)
= $26,750 / $11,125 = 2.40

E4-26
Requirement 1

HOUSTON VETERINARY HOSPITAL
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 31,200				$ 31,200				$ 31,200	
Accounts Receivable	8,700		f. $ 1,400		10,100				10,100	
Office Supplies	1,500			$ 275 b.	1,225				1,225	
Prepaid Rent	6,000			600 a.	5,400				5,400	
Equipment	27,000				27,000				27,000	
Acc. Dep.—Equipment				1,900 c.		$ 1,900				$ 1,900
Accounts Payable		$ 3,400				3,400				3,400
Utilities Payable		310				310				310
Salaries Payable				1,075 e.		1,075				1,075
Unearned Revenue		13,000	d. 1,300			11,700				11,700
Common Stock		41,000				41,000				41,000
Retained Earnings		55,690				55,690				55,690
Dividends	28,000				28,000				28,000	
Service Revenue		35,000		2,700 d., f.		37,700		$ 37,700		
Rent Expense	23,000		a. 600		23,600		$ 23,600			
Salaries Expense	12,000		e. 1,075		13,075		13,075			
Supplies Expense			b. 275		275		275			
Utilities Expense	11,000				11,000		11,000			
Dep. Exp.—Equipment			c. 1,900		1,900		1,900			
Total	$ 148,400	$ 148,400	$ 6,550	$ 6,550	$ 152,775	$ 152,775	$ 49,850	$ 37,700	$ 102,925	$ 115,075
						Net Loss		12,150	12,150	
Total							$ 49,850	$ 49,850	$ 115,075	$ 115,075

E4-26, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	37,700	
	Income Summary		37,700
	To close revenue.		
31	Income Summary	49,850	
	Rent Expense		23,600
	Salaries Expense		13,075
	Supplies Expense		275
	Utilities Expense		11,000
	Depreciation Expense—Equipment		1,900
	To close expenses.		
31	Retained Earnings	12,150	
	Income Summary		12,150
	To close Income Summary.		
31	Retained Earnings	28,000	
	Dividends		28,000
	To close dividends.		

Requirement 3

HOUSTON VETERINARY HOSPITAL
Post-Closing Trial Balance
December 31, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 31,200	
Accounts Receivable	10,100	
Office Supplies	1,225	
Prepaid Rent	5,400	
Equipment	27,000	
Accumulated Depreciation—Equipment		$ 1,900
Accounts Payable		3,400
Utilities Payable		310
Salaries Payable		1,075
Unearned Revenue		11,700
Common Stock		41,000
Retained Earnings		15,540
Total	$ 74,925	$ 74,925

E4A-27

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Service Revenue	2,600	
	Accounts Receivable		2,600
	To reverse accrued revenue.		
1	Salaries Payable	600	
	Salaries Expense		600
	To reverse accrued salaries.		

E4A-28
Requirement 1

Salaries Payable			
		0	Bal.12/31/18

Salaries Expense			
Bal.12/31/18	1,900		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Salaries Expense	8,000	
	Salaries Payable		8,000
	To adjust accrued salaries.		
31	Income Summary	9,900	
	Salaries Expense		9,900
	To close salaries expense.		
2019			
Jan. 4	Salaries Payable	8,000	
	Salaries Expense	500	
	Cash		8,500
	To pay salaries.		

E4A-28, cont.
Requirement 2, cont.

Salaries Payable

		0	12/31/18
		8,000	12/31/18
		8,000	Bal.
1/4/19	8,000		
		0	Bal.

Salaries Expense

12/31/18	1,900		
12/31/18	8,000		
Bal.	9,900		
		9,900	12/31/18
Bal.	0		
1/4/19	500		
Bal.	500		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Salaries Expense	8,000	
	Salaries Payable		8,000
	To adjust accrued salaries.		
31	Income Summary	9,900	
	Salaries Expense		9,900
	To close salaries expense.		
2019			
Jan. 1	Salaries Payable	8,000	
	Salaries Expense		8,000
	To reverse accrued salaries.		
Jan. 4	Salaries Expense	8,500	
	Cash		8,500
	To pay salaries.		

Salaries Payable

		0	12/31/18
		8,000	12/31/18
		8,000	Bal.
1/1/19	8,000		
		0	Bal.

Salaries Expense

Bal.12/31/18	1,900		
12/31/18	8,000		
Bal.	9,900		
		9,900	12/31/18
Bal.	0		
1/4/19	8,500	8,000	1/1/19
Bal.	500		

After all the journal entries are made, the balances are the same, regardless of whether or not reversing entries are made.

Problems (Group A)

P4-29A
Requirement 1

ERICKSON REAL ESTATE APPRAISAL Income Statement Year Ended June 30, 2018		
Revenues:		
Service Revenue		$ 48,100
Expenses:		
Salaries Expense	$ 33,500	
Interest Expense	8,500	
Depreciation Expense—Building	8,200	
Insurance Expense	4,400	
Utilities Expense	2,700	
Supplies Expense	300	
Total Expenses		57,600
Net Loss		$ (9,500)

Requirement 2

ERICKSON REAL ESTATE APPRAISAL Statement of Retained Earnings Year Ended June 30, 2018	
Retained Earnings, July 1, 2017	$ 39,500
Net loss for the year	(9,500)
	30,000
Dividends	(27,300)
Retained Earnings, June 30, 2018	$ 2,700

P4-29A, cont.
Requirement 3

ERICKSON REAL ESTATE APPRAISAL
Balance Sheet
June 30, 2018

Assets			
Current Assets:			
Cash		$ 4,600	
Accounts Receivable		5,300	
Office Supplies		1,500	
Prepaid Insurance		1,700	
Total Current Assets			$ 13,100
Property, Plant, and Equipment:			
Land		13,000	
Building	$ 82,000		
Less: Accumulated Depreciation—Building	(25,200)	56,800	
Total Property, Plant, and Equipment			69,800
Total Assets			$ 82,900
Liabilities			
Current Liabilities:			
Accounts Payable		$ 18,700	
Interest Payable		8,500	
Salaries Payable		2,400	
Unearned Revenue		7,600	
Total Current Liabilities			$ 37,200
Long-term Liabilities:			
Notes Payable			40,000
Total Liabilities			77,200
Stockholders' Equity			
Common Stock		3,000	
Retained Earnings		2,700	
Total Stockholders' Equity			5,700
Total Liabilities and Stockholders' Equity			$ 82,900

P4-29A, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Service Revenue	48,100	
	Income Summary		48,100
	To close revenue.		
30	Income Summary	57,600	
	Insurance Expense		4,400
	Salaries Expense		33,500
	Supplies Expense		300
	Interest Expense		8,500
	Utilities Expense		2,700
	Depreciation Expense—Building		8,200
	To close expenses.		
30	Retained Earnings	9,500	
	Income Summary		9,500
	To close Income Summary.		
30	Retained Earnings	27,300	
	Dividends		27,300
	To close dividends.		

P4-29A, cont.
Requirement 5

Cash

	Debit	Credit	
Bal.	4,600		
Bal.	4,600		

Accounts Receivable

	Debit	Credit	
Bal.	5,300		
Bal.	5,300		

Office Supplies

	Debit	Credit	
Bal.	1,500		
Bal.	1,500		

Prepaid Insurance

	Debit	Credit	
Bal.	1,700		
Bal.	1,700		

Land

	Debit	Credit	
Bal.	13,000		
Bal.	13,000		

Building

	Debit	Credit	
Bal.	82,000		
Bal.	82,000		

Accumulated Depreciation—Building

	Debit	Credit	
		25,200	Bal.
		25,200	Bal.

Dividends

	Debit	Credit	
Bal.	27,300		
		27,300	Clos.
Bal.	0		

Income Summary

	Debit	Credit	
Clos.	57,600	48,100	Clos.
		9,500	Clos.
		0	Bal.

Service Revenue

	Debit	Credit	
		48,100	Bal.
Clos.	48,100		
		0	Bal.

Insurance Expense

	Debit	Credit	
Bal.	4,400		
		4,400	Clos.
Bal.	0		

Salaries Expense

	Debit	Credit	
Bal.	33,500		
		33,500	Clos.
Bal.	0		

Supplies Expense

	Debit	Credit	
Bal.	300		
		300	Clos.
Bal.	0		

Interest Expense

	Debit	Credit	
Bal.	8,500		
		8,500	Clos.
Bal.	0		

P4-29A, cont.
Requirement 5, cont.

Accounts Payable

		18,700	Bal.
		18,700	Bal.

Interest Payable

		8,500	Bal.
		8,500	Bal.

Salaries Payable

		2,400	Bal.
		2,400	Bal.

Unearned Revenue

		7,600	Bal.
		7,600	Bal.

Notes Payable

		40,000	Bal.
		40,000	Bal.

Common Stock

		3,000	Bal.
		3,000	Bal.

Retained Earnings

Clos.	9,500	39,500	Bal.
Clos.	27,300		
		2,700	Bal.

Utilities Expense

Bal.	2,700		
		2,700	Clos.
Bal.	0		

Depreciation Expense—Building

Bal.	8,200		
		8,200	Clos.
Bal.	0		

P4-29A, cont.
Requirement 6

ERICKSON REAL ESTATE APPRAISAL Post-Closing Trial Balance June 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,600	
Accounts Receivable	5,300	
Office Supplies	1,500	
Prepaid Insurance	1,700	
Land	13,000	
Building	82,000	
Accumulated Depreciation—Building		$ 25,200
Accounts Payable		18,700
Interest Payable		8,500
Salaries Payable		2,400
Unearned Revenue		7,600
Notes Payable (long-term)		40,000
Common Stock		3,000
Retained Earnings		2,700
Total	$ 108,100	$ 108,100

P4-30A
Requirement 1

BOSTON IRRIGATION SYSTEM Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 74,500
Expenses:		
Salaries Expense	$ 16,400	
Depreciation Expense—Equipment	2,500	
Depreciation Expense—Building	1,800	
Supplies Expense	1,100	
Insurance Expense	1,100	
Interest Expense	2,200	
Total Expenses		25,100
Net Income		$ 49,400

P4-30A, cont.
Requirement 2

BOSTON IRRIGATION SYSTEM Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 21,000
Net income for the year	49,400
	70,400
Dividends	(2,200)
Retained Earnings, December 31, 2018	$ 68,200

Requirement 3

BOSTON IRRIGATION SYSTEM Balance Sheet December 31, 2018			
Assets			
Current Assets:			
Cash		$ 11,800	
Accounts Receivable		46,000	
Office Supplies		29,500	
Prepaid Insurance		6,300	
Total Current Assets			$ 93,600
Property, Plant, and Equipment:			
Building	$ 63,000		
Less: Accumulated Depreciation—Building	(25,000)	38,000	
Equipment	28,000		
Less: Accumulated Depreciation—Equipment	(7,700)	20,300	
Total Property, Plant, and Equipment			58,300
Total Assets			$ 151,900
Liabilities			
Current Liabilities:			
Accounts Payable		$ 32,100	
Interest Payable		2,200	
Salaries Payable		2,600	
Unearned Revenue		2,100	
Total Current Liabilities			$ 39,000
Long-term Liabilities:			
Notes Payable			32,700
Total Liabilities			71,700
Stockholders’ Equity			
Common Stock		12,000	
Retained Earnings		68,200	
Total Stockholders’ Equity			80,200
Total Liabilities and Stockholders’ Equity			$ 151,900

P4-30A, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	74,500	
	Income Summary		74,500
	To close revenue.		
31	Income Summary	25,100	
	Insurance Expense		1,100
	Salaries Expense		16,400
	Supplies Expense		1,100
	Interest Expense		2,200
	Depreciation Expense—Building		1,800
	Depreciation Expense—Equipment		2,500
	To close expenses.		
31	Income Summary	49,400	
	Retained Earnings		49,400
	To close Income Summary.		
31	Retained Earnings	2,200	
	Dividends		2,200
	To close dividends.		

Requirement 5

Current ratio = Total current assets* / Total current liabilities*
= $93,600 / $39,000 = 2.4

*From the balance sheet

- The company's ability to pay current debts improved from 2.3 to 2.4.

P4-31A
Requirement 1

FARISH INVESTMENT ADVISERS
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 30,000				$ 30,000				$ 30,000	
Accounts Receivable	51,000		e. $6,500		57,500				57,500	
Office Supplies	7,000			$ 2,500 b.	4,500				4,500	
Equipment	28,000				28,000				28,000	
Accum. Dep.—Equip		$ 9,000		4,500 c.		$ 13,500				$ 13,500
Accounts Payable		13,000				13,000				13,000
Salaries Payable				5,000 d.		5,000				5,000
Unearned Revenue		5,500	a. 800			4,700				4,700
Notes Payable		21,000				21,000				21,000
Common Stock		27,000				27,000				27,000
Retained Earnings		29,500				29,500				29,500
Dividends	29,000				29,000				29,000	
Service Revenue		93,000		800 a.		100,300		$ 100,300		
				6,500 e.						
Insurance Expense	2,500				2,500		$ 2,500			
Salaries Expense	40,000		d. 5,000		45,000		45,000			
Supplies Expense			b. 2,500		2,500		2,500			
Interest Expense	5,500				5,500		5,500			
Rent Expense	5,000				5,000		5,000			
Dep. Expense—Equip.			c. 4,500		4,500		4,500			
Total	$ 198,000	$ 198,000	$ 19,300	$ 19,300	$ 214,000	$ 214,000	$ 65,000	$ 100,300	$ 149,000	$ 113,700
						Net Income	35,300			35,300
Total							$ 100,300	$ 100,300	$ 149,000	$ 149,000

P4-31A, cont.
Requirement 2

FARISH INVESTMENT ADVISERS Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 100,300
Expenses:		
Insurance Expense	$ 2,500	
Salaries Expense	45,000	
Supplies Expense	2,500	
Interest Expense	5,500	
Rent Expense	5,000	
Depreciation Expense—Equipment	4,500	
Total Expenses		65,000
Net Income		$ 35,300

FARISH INVESTMENT ADVISERS Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 29,500
Net income for the year	35,300
	64,800
Dividends	(29,000)
Retained Earnings, December 31, 2018	$ 35,800

P4-31A, cont.
Requirement 2, cont.

FARISH INVESTMENT ADVISERS
Balance Sheet
December 31, 2018

Assets			Liabilities		
Current Assets:			Current Liabilities:		
Cash	$ 30,000		Accounts Payable	$ 13,000	
Accounts Receivable	57,500		Salaries Payable	5,000	
Office Supplies	4,500		Unearned Revenue	4,700	
Total Current Assets		$ 92,000	Total Current Liabilities		$ 22,700
Property, Plant, and Equipment:			Long-Term Liabilities:		
Equipment	28,000		Notes Payable		21,000
Less: Acc. Depr.—Equip.	(13,500)		Total Liabilities		43,700
Total Property, Plant, and Equipment		14,500			
			Stockholders' Equity		
			Common Stock		27,000
			Retained Earnings		35,800
			Total Stockholders' Equity		62,800
Total Assets		$ 106,500	Total Liabilities and Stockholders' Equity		$ 106,500

P4-31A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	100,300	
	Income Summary		100,300
	To close revenue.		
31	Income Summary	65,000	
	Insurance Expense		2,500
	Salaries Expense		45,000
	Supplies Expense		2,500
	Interest Expense		5,500
	Rent Expense		5,000
	Depreciation Expense—Equipment		4,500
	To close expenses.		
31	Income Summary	35,300	
	Retained Earnings		35,300
	To close Income Summary.		
31	Retained Earnings	29,000	
	Dividends		29,000
	To close dividends.		

P4-32A
Requirements 1, 3, and 6

Cash

Bal.	13,480		
Bal.	13,480		

Common Stock

		24,000	Bal.
		24,000	Bal.

Accounts Receivable

Bal.	14,500		
Bal.	14,500		

Retained Earnings

		4,500	Bal.
Clos.	4,600	18,890	Clos.
		18,790	Bal.

Prepaid Rent

Bal.	2,320	220	Adj.
Bal.	2,100		

Dividends

Bal.	4,600		
		4,600	Clos.
		0	Bal.

P4-32A, cont.
Requirements 1, 3, and 6, cont.

Income Summary

Clos.	4,810	23,700	Clos.
Clos.	18,890		
		0	Bal.

Office Supplies

Bal.	1,700	1,500	Adj.
Bal.	200		

Service Revenue

		19,500	Bal.
		4,200	Adj.
Clos.	23,700	23,700	Bal.
		0	Bal.

Equipment

Bal.	23,000		
Bal.	23,000		

Salaries Expense

Bal.	2,500		
Adj.	200		
Bal.	2,700	2,700	Clos.
Bal.	0		

Accumulated Depreciation—Equip.

		1,000	Bal.
		390	Adj.
		1,390	Bal.

Rent Expense

Bal.	0		
Adj.	220		
Bal.	220	220	Clos.
Bal.	0		

Accounts Payable

		7,100	Bal.
		7,100	Bal.

Depreciation Expense—Equip.

Bal.	0		
Adj.	390		
Bal.	390	390	Clos.
Bal.	0		

Salaries Payable

		0	Bal.
		200	Adj.
		200	Bal.

Supplies Expense

Bal.	0		
Adj.	1,500		
Bal.	1,500	1,500	Clos.
Bal.	0		

Unearned Revenue

		6,000	Bal.
Adj.	4,200		
		1,800	Bal.

P4-32A, cont.
Requirement 2

WALTON ANVILS
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 13,480				$ 13,480				$ 13,480	
Accounts Receivable	14,500				14,500				14,500	
Prepaid Rent	2,320			$ 220 b.	2,100				2,100	
Office Supplies	1,700			1,500 c.	200				200	
Equipment	23,000				23,000				23,000	
Acc. Depreciation—Eq.		$ 1,000		390 d.		1,390				$ 1,390
Accounts Payable		7,100				7,100				7,100
Salaries Payable				200 e.		200				200
Unearned Revenue		6,000	a. $ 4,200			1,800				1,800
Common Stock		24,000				24,000				24,000
Retained Earnings		4,500				4,500				4,500
Dividends	4,600				4,600				4,600	
Service Revenue		19,500		4,200 a.		23,700		$ 23,700		
Salaries Expense	2,500		e. 200		2,700		$ 2,700			
Rent Expense			b. 220		220		220			
Dep. Expense—Eq.			d. 390		390		390			
Supplies Expense			c. 1,500		1,500		1,500			
Total	$ 62,100	$ 62,100	$ 6,510	$ 6,510	$ 62,690	$ 62,690	$ 4,810	$ 23,700	$ 57,880	$38,990
						Net Income	18,890			18,890
Total							$ 23,700	$23,700	$ 57,880	$ 57,880

P4-32A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	4,200	
	Service Revenue		4,200
	To adjust revenue earned.		
31	Rent Expense	220	
	Prepaid Rent		220
	To adjust rent expense		
31	Supplies Expense	1,500	
	Office Supplies		1,500
	To adjust office supplies.		
31	Depreciation Expense—Equipment	390	
	Accumulated Depreciation—Equipment		390
	To adjust depreciation		
31	Salaries Expense	200	
	Salaries Payable		200
	To adjust accrued salaries		

P4-32A, cont.
Requirement 4

WALTON ANVILS Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 13,480	
Accounts Receivable	14,500	
Prepaid Rent	2,100	
Office Supplies	200	
Equipment	23,000	
Accumulated Depreciation—Equipment		$ 1,390
Accounts Payable		7,100
Salaries Payable		200
Unearned Revenue		1,800
Common Stock		24,000
Retained Earnings		4,500
Dividends	4,600	
Service Revenue		23,700
Salaries Expense	2,700	
Rent Expense	220	
Depreciation Expense—Equipment	390	
Supplies Expense	1,500	
Total	$ 62,690	$ 62,690

P4-32A, cont.
Requirement 5

WALTON ANVILS Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 23,700
Expenses:		
Salaries Expense	$ 2,700	
Supplies Expense	1,500	
Depreciation Expense—Equipment	390	
Rent Expense	220	
Total Expenses		4,810
Net Income		$ 18,890

WALTON ANVILS Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 4,500
Net income for the year	18,890
	23,390
Dividends	(4,600)
Retained Earnings, December 31, 2018	$ 18,790

P4-32A, cont.
Requirement 5, cont.

WALTON ANVILS
Balance Sheet
December 31, 2018

Assets		
Current Assets:		
Cash	$ 13,480	
Accounts Receivable	14,500	
Prepaid Rent	2,100	
Office Supplies	200	
Total Current Assets		$ 30,280
Property, Plant, and Equipment:		
Equipment	23,000	
Less: Accumulated Depreciation—Equipment	(1,390)	
Total Property, Plant, and Equipment		21,610
Total Assets		$ 51,890
Liabilities		
Current Liabilities:		
Accounts Payable	$ 7,100	
Salaries Payable	200	
Unearned Revenue	1,800	
Total Current Liabilities		$ 9,100
Total Liabilities		9,100
Stockholders' Equity		
Common Stock	24,000	
Retained Earnings	18,790	
Total Stockholders' Equity		42,790
Total Liabilities and Stockholders' Equity		$ 51,890

P4-32A, cont.
Requirement 6

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	23,700	
	Income Summary		23,700
	To close revenue.		
31	Income Summary	4,810	
	Salaries Expense		2,700
	Rent Expense		220
	Depreciation Expense—Equipment		390
	Supplies Expense		1,500
	To close expenses.		
31	Income Summary	18,890	
	Retained Earnings		18,890
	To close Income Summary.		
31	Retained Earnings	4,600	
	Dividends		4,600
	To close dividends.		

P4-32A, cont.
Requirement 7

WALTON ANVILS Post-Closing Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 13,480	
Accounts Receivable	14,500	
Prepaid Rent	2,100	
Office Supplies	200	
Equipment	23,000	
Accumulated Depreciation—Equipment		$ 1,390
Accounts Payable		7,100
Salaries Payable		200
Unearned Revenue		1,800
Common Stock		24,000
Retained Earnings		18,790
Total	$ 53,280	$ 53,280

Requirement 8

Current ratio = Total current assets* / Total current liabilities*

= $30,280 / $9,100 = 3.33

*From the Balance Sheet

P4-33A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Cash	70,000	
	Common Stock		70,000
1	Equipment	12,000	
	Cash		12,000
1	Prepaid Insurance	1,750	
	Cash		1,750
9	Land	20,000	
	Cash		20,000
10	Office Supplies	2,800	
	Accounts Payable		2,800
19	Cash	15,000	
	Notes Payable		15,000
22	Advertising Expenses	1,300	
	Cash		1,300
26	Accounts Payable	900	
	Cash		900
28	Utilities Expense	280	
	Utilities Payable		280
31	Cash	16,000	
	Accounts Receivable	3,600	
	Service Revenue		19,600
31	Salaries Expense	3,800	
	Rent Expense	1,200	
	Cash		5,000
31	Cash	1,440	
	Unearned Revenue		1,440
31	Dividends	5,500	
	Cash		5,500

P4-33A, cont.
Requirements 1, 4, and 7

Cash

Dec. 1	70,000	12,000	Dec. 1
Dec. 19	15,000	1,750	Dec. 1
Dec. 31	16,000	20,000	Dec. 9
Dec. 31	1,440	1,300	Dec. 22
		900	Dec. 26
		5,000	Dec. 31
		5,500	Dec. 31
Bal.	55,990		

Dividends

Dec. 31	5,500	5,500	Clos.
Bal.	0		

Income Summary

Clos.	9,005	19,600	Clos.
Clos.	10,595	10,595	Bal.
		0	Bal.

Accounts Receivable

Dec. 31	3,600		
Bal.	3,600		

Service Revenue

		19,600	Dec. 31
Clos.	19,600		
		0	Bal.

Office Supplies

Dec. 10	2,800		
		1,800	Adj.
Bal.	1,000		

Salaries Expense

Dec. 31	3,800		
		3,800	Clos.
Bal.	0		

Prepaid Insurance

Dec. 1	1,750	350	Adj.
Bal.	1,400		

Rent Expense

Dec. 31	1,200		
		1,200	Clos.
Bal.	0		

Land

Dec. 9	20,000		
Bal.	20,000		

Utilities Expense

Dec. 28	280		
		280	Clos.
Bal.	0		

Equipment

Dec. 1	12,000		
Bal.	12,000		

Advertising Expense

Dec. 22	1,300		
		1,300	Clos.
Bal.	0		

P4-33A, cont.
Requirements 1, 4, and 7, cont.

Accumulated Depreciation—Equipment

		200	Adj.
		200	Bal.

Supplies Expense

Adj.	1,100		
		1,100	Clos.
Bal.	0		

Accounts Payable

		2,800	Dec. 10
Dec. 26	900		
		1,900	Bal.

Insurance Expense

Adj.	350		
		350	Clos.
Bal.	0		

Utilities Payable

		280	Dec. 28
		280	Bal.

Interest Expense

Adj.	75		
		75	Clos.
Bal.	0		

Interest Payable

		75	Adj.
		75	Bal.

Depreciation Expense—Equipment

Adj.	200		
		200	Clos.
Bal.	0		

Unearned Revenue

		1,440	Dec. 31
		1,440	Bal.

Notes Payable

		15,000	Dec. 19
		15,000	Bal.

Common Stock

		70,000	Dec. 1
		70,000	Bal.

Retained Earnings

		0	Dec. 1
Clos.	5,500	10,595	Clos.
		5,095	Bal.

P4-33A, cont.
Requirement 2

WALDO'S QUALITY AUTOMOTIVE Unadjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 55,990	
Accounts Receivable	3,600	
Office Supplies	2,800	
Prepaid Insurance	1,750	
Land	20,000	
Equipment	12,000	
Accounts Payable		$ 1,900
Utilities Payable		280
Unearned Revenue		1,440
Notes Payable		15,000
Common Stock		70,000
Dividends	5,500	
Service Revenue		19,600
Salaries Expense	3,800	
Rent Expense	1,200	
Utilities Expense	280	
Advertising Expense	1,300	
Total	$ 108,220	$ 108,220

P4-33A, cont.
Requirement 3

WALDO'S QUALITY AUTOMOTIVE
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 55,990				$ 55,990				$ 55,990	
Accounts Receivable	3,600				3,600				3,600	
Office Supplies	2,800			$ 1,800 a.	1,000				1,000	
Prepaid Insurance	1,750			350 c.	1,400				1,400	
Land	20,000				20,000				20,000	
Equipment	12,000				12,000				12,000	
Acc. Dep.—Equip.				200 b.		200				200
Accounts Payable		$ 1,900				1,900				1,900
Utilities Payable		280				280				280
Interest Payable				75 d.		75				75
Unearned Revenue		1,440				1,440				1,440
Notes Payable		15,000				15,000				15,000
Common Stock		70,000				70,000				70,000
Dividends	5,500				5,500				5,500	
Service Revenue		19,600				19,600		$ 19,600		
Salaries Expense	3,800				3,800		$ 3,800			
Rent Expense	1,200				1,200		1,200			
Utilities Expense	280				280		280			
Advertising Expense	1,300				1,300		1,300			
Supplies Expense			a. $ 1,800		1,800		1,800			
Insurance Expense			c. 350		350		350			
Interest Expense			d. 75		75		75			
Dep. Exp.—Equip.			b. 200		200		200			
Total	$ 108,220	$ 108,220	$ 2,425	$2,425	$ 108,495	$ 108,495	$ 8,305	$ 19,600	$ 99,490	$ 88,895
						Net Income	10,595			10,595
Total							$ 19,600	$ 19,600	$ 99,490	$ 99,490

P4-33A, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Supplies Expense	1,800	
	Office Supplies		1,800
	To adjust supplies used.		
31	Depreciation Expense—Equipment	200	
	Accumulated Depreciation—Equipment		200
	To adjust depreciation expense		
31	Insurance Expense	350	
	Prepaid Insurance		350
	To adjust insurance. ($1,750 / 5 months)		
31	Interest Expense	75	
	Interest Payable		75
	To adjust interest.		

P4-33A, cont.
Requirement 5

WALDO'S QUALITY AUTOMOTIVE Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 55,990	
Accounts Receivable	3,600	
Office Supplies	1,000	
Prepaid Insurance	1,400	
Land	20,000	
Equipment	12,000	
Accumulated Depreciation—Equipment		$ 200
Accounts Payable		1,900
Utilities Payable		280
Interest Payable		75
Unearned Revenue		1,440
Notes Payable		15,000
Common Stock		70,000
Dividends	5,500	
Service Revenue		19,600
Salaries Expense	3,800	
Rent Expense	1,200	
Utilities Expense	280	
Advertising Expense	1,300	
Supplies Expense	1,800	
Insurance Expense	350	
Interest Expense	75	
Depreciation Expense—Equipment	200	
Total	$ 108,495	$ 108,495

P4-33A, cont.
Requirement 6

WALDO'S QUALITY AUTOMOTIVE
Income Statement
Month Ended December 31, 2018

Revenues:		
Service Revenue		$ 19,600
Expenses:		
Salaries Expense	$ 3,800	
Advertising Expense	1,300	
Rent Expense	1,200	
Supplies Expense	1,800	
Insurance Expense	350	
Utilities Expense	280	
Depreciation Expense—Equipment	200	
Interest Expense	75	
Total Expenses		9,005
Net Income		$ 10,595

WALDO'S QUALITY AUTOMOTIVE
Statement of Retained Earnings
Month Ended December 31, 2018

Retained Earnings, December 1, 2018	$ 0
Net income for the month	10,595
	10,595
Dividends	(5,500)
Retained Earnings, December 31, 2018	$ 5,095

P4-33A, cont.
Requirement 6, cont.

WALDO'S QUALITY AUTOMOTIVE
Balance Sheet
December 31, 2018

Assets			
Current Assets:			
Cash		$ 55,990	
Accounts Receivable		3,600	
Office Supplies		1,000	
Prepaid Insurance		1,400	
Total Current Assets			$ 61,990
Property, Plant, and Equipment:			
Land		20,000	
Equipment	$ 12,000		
Less: Accumulated Depreciation—Equipment	(200)	11,800	
Total Property, Plant, and Equipment			31,800
Total Assets			$ 93,790
Liabilities			
Current Liabilities:			
Accounts Payable		$ 1,900	
Utilities Payable		280	
Interest Payable		75	
Unearned Revenue		1,440	
Total Current Liabilities			$ 3,695
Long-term Liabilities:			
Notes Payable			15,000
Total Liabilities			18,695
Stockholders' Equity			
Common Stock		70,000	
Retained Earnings		5,095	
Total Stockholders' Equity			75,095
Total Liabilities and Stockholders' Equity			$ 93,790

P4-33A, cont.
Requirement 7

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	19,600	
	Income Summary		19,600
	To close revenue.		
31	Income Summary	9,005	
	Salaries Expense		3,800
	Rent Expense		1,200
	Utilities Expense		280
	Advertising Expense		1,300
	Supplies Expense		1,800
	Insurance Expense		350
	Interest Expense		75
	Depreciation Expense—Equipment		200
	To close expenses.		
31	Income Summary	10,595	
	Retained Earnings		10,595
	To close Income Summary.		
31	Retained Earnings	5,500	
	Dividends		5,500
	To close dividends.		

P4-33A, cont.
Requirement 8

WALDO'S QUALITY AUTOMOTIVE Post-Closing Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 55,990	
Accounts Receivable	3,600	
Office Supplies	1,000	
Prepaid Insurance	1,400	
Land	20,000	
Equipment	12,000	
Accumulated Depreciation—Equipment		$ 200
Accounts Payable		1,900
Utilities Payable		280
Interest Payable		75
Unearned Revenue		1,440
Notes Payable		15,000
Common Stock		70,000
Retained Earnings		5,095
Total	$93,990	$ 93,990

P4A-34A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Equipment	2,100	
	Accumulated Depreciation—Equipment		2,100
	To adjust depreciation.		
31	Wages Expense	1,100	
	Wages Payable		1,100
	To adjust wages.		
31	Supplies Expense	500	
	Office Supplies		500
	To adjust office supplies.		
31	Insurance Expense	600	
	Prepaid Insurance		600
	To adjust insurance		
31	Unearned Revenue	4,800	
	Service Revenue		4,800
	To adjust revenue earned.		
31	Accounts Receivable	1,300	
	Service Revenue		1,300
	To adjust accrued revenue.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Wages Payable	1,100	
	Wages Expense		1,100
	To reverse accrued wages.		
1	Service Revenue	1,300	
	Accounts Receivable		1,300
	To reverse accrued revenue.		

P4A-34A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Wages Expense	1,900	
	Cash		1,900
	To pay wages.		
10	Cash	1,500	
	Service Revenue		1,500
	Receipt of cash for revenue.		

Problems (Group B)

P4-35B
Requirement 1

ROCKET REAL ESTATE APPRAISAL
Income Statement
Year Ended June 30, 2018

Revenues:		
Service Revenue		$ 48,100
Expenses:		
Salaries Expense	$ 32,000	
Depreciation Expense—Building	7,100	
Insurance Expense	4,100	
Utilities Expense	2,900	
Supplies Expense	600	
Interest Expense	8,000	
Total Expenses		54,700
Net Loss		$ (6,600)

P4-35B, cont.
Requirement 2

ROCKET REAL ESTATE APPRAISAL
Statement of Retained Earnings
Year Ended June 30, 2018

Retained Earnings, July 1, 2017	$ 33,000
Net loss for the year	(6,600)
	26,400
Dividends	(25,800)
Retained Earnings, June 30, 2018	$ 600

Requirement 3

ROCKET REAL ESTATE APPRAISAL
Balance Sheet
June 30, 2018

Assets			
Current Assets:			
Cash		$ 5,000	
Accounts Receivable		5,500	
Office Supplies		1,600	
Prepaid Insurance		1,700	
Total Current Assets			$ 13,800
Property, Plant, and Equipment:			
Land		12,800	
Building	$ 71,000		
Less: Accumulated Depreciation—Building	(25,200)	45,800	
Total Property, Plant, and Equipment			58,600
Total Assets			$ 72,400
Liabilities			
Current Liabilities:			
Accounts Payable		$ 18,700	
Interest Payable		8,000	
Salaries Payable		2,100	
Unearned Revenue		1,000	
Total Current Liabilities			$ 29,800
Long-Term Liabilities:			
Notes Payable			37,000
Total Liabilities			66,800
Stockholders' Equity			
Common Stock		5,000	
Retained Earnings		600	
Total Stockholders' Equity			5,600
Total Liabilities and Stockholders' Equity			$ 72,400

P4-35B, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Service Revenue	48,100	
	Income Summary		48,100
	To close revenue.		
30	Income Summary	54,700	
	Insurance Expense		4,100
	Salaries Expense		32,000
	Supplies Expense		600
	Interest Expense		8,000
	Utilities Expense		2,900
	Depreciation Expense—Building		7,100
	To close expenses.		
30	Retained Earnings	6,600	
	Income Summary		6,600
	To close Income Summary.		
30	Retained Earnings	25,800	
	Dividends		25,800
	To close dividends.		

Requirement 5

Cash

Bal.	5,000		
Bal.	5,000		

Notes Payable

		37,000	Bal.
		37,000	Bal.

Common Stock

		5,000	Bal.
		5,000	Bal.

Accounts Receivable

Bal.	5,500		
Bal.	5,500		

Retained Earnings

Clos.	6,600	33,000	Bal.
Clos.	25,800		
		600	Bal.

Office Supplies

Bal.	1,600		
Bal.	1,600		

Dividends

Bal.	25,800		
		25,800	Clos.
Bal.	0		

P4-35B, cont.
Requirement 5, cont.

Prepaid Insurance

Bal.	1,700		
Bal.	1,700		

Land

Bal.	12,800		
Bal.	12,800		

Building

Bal.	12,800		
Bal.	12,800		

Accumulated Depreciation—Building

Bal.	12,800		
Bal.	12,800		

Accounts Payable

		18,700	Bal.
		18,700	Bal.

Interest Payable

		8,000	Bal.
		8,000	Bal.

Salaries Payable

		2,100	Bal.
		2,100	Bal.

Unearned Revenue

		1,000	Bal.
		1,000	Bal.

Income Summary

Clos.	54,700	48,100	Clos.
Bal.	6,600	6,600	Clos.
		0	Bal.

Service Revenue

		48,100	Bal.
Clos.	48,100		
		0	Bal.

Insurance Expense

Bal.	4,100		
		4,100	Clos.
Bal.	0		

Salaries Expense

Bal.	32,000		
		32,000	Clos.
Bal.	0		

Supplies Expense

Bal.	600		
		600	Clos.
Bal.	0		

Interest Expense

Bal.	8,000		
		8,000	Clos.
Bal.	0		

Utilities Expense

Bal.	2,900		
		2,900	Clos.
Bal.	0		

Depreciation Expense—Building

Bal.	7,100		
		7,100	Clos.
Bal.	0		

P4-35B, cont.
Requirement 6

ROCKET REAL ESTATE APPRAISAL Post-Closing Trial Balance June 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 5,000	
Accounts Receivable	5,500	
Office Supplies	1,600	
Prepaid Insurance	1,700	
Land	12,800	
Building	71,000	
Accumulated Depreciation—Building		$ 25,200
Accounts Payable		18,700
Interest Payable		8,000
Salaries Payable		2,100
Unearned Revenue		1,000
Notes Payable		37,000
Common Stock		5,000
Retained Earnings		600
Total	$ 97,600	$ 97,600

P4-36B

Requirement 1

BRADLEY IRRIGATION SYSTEM
Income Statement
Year Ended December 31, 2018

Revenues:		
Service Revenue		$ 56,000
Expenses:		
Insurance Expense	$ 1,200	
Salaries Expense	16,200	
Supplies Expense	1,400	
Interest Expense	2,000	
Depreciation Expense—Building	1,900 1,200	
Depreciation Expense—Equipment	2,600	
Total Expenses		24,600
Net Income		$ 31,400

Requirement 2

BRADLEY IRRIGATION SYSTEM
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 32,000
Net income for the year	31,400
	63,400
Dividends	(3,200)
Retained Earnings, December 31, 2018	$ 60,200

Requirement 3

BRADLEY IRRIGATION SYSTEM Balance Sheet December 31, 2018			
Assets			
Current Assets:			
Cash		$ 12,000	
Accounts Receivable		51,000	
Office Supplies		28,300	
Prepaid Insurance		4,700	
Total Current Assets			$ 96,000
Property, Plant, and Equipment:			
Building	$ 57,300		
Less: Accumulated Depreciation—Building	(25,300)	32,000	
Equipment	21,000		
Less: Accumulated Depreciation—Equipment	(6,800)	14,200	
Total Property, Plant, and Equipment			46,200
Total Assets			$ 142,200
Liabilities			
Current Liabilities:			
Accounts Payable		$ 40,700	
Interest Payable		2,000	
Salaries Payable		3,500	
Unearned Revenue		1,800	
Total Current Liabilities			$ 48,000
Long-Term Liabilities:			
Notes Payable			21,000
Total Liabilities			69,000
Stockholders' Equity			
Common Stock		13,000	
Retained Earnings		60,200	
Total Stockholders' Equity			73,200
Total Liabilities and Stockholders' Equity			$ 142,200

P4-36B, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	56,000	
	Income Summary		56,000
	To close revenue.		
31	Income Summary	24,600	
	Insurance Expense		1,200
	Salaries Expense		16,200
	Supplies Expense		1,400
	Interest Expense		2,000
	Depreciation Expense—Building		1,200
	Depreciation Expense—Equipment		2,600
	To close expenses.		
31	Income Summary	31,400	
	Retained Earnings		31,400
	To close Income Summary.		
31	Retained Earnings	3,200	
	Dividends		3,200
	To close dividends.		

Requirement 5

Current ratio = Total current assets* / Total current liabilities*
= $96,000 / $48,000 = 2.0

The current ratio improved from 2017 to 2018.

*From the balance sheet

P4-37B
Requirement 1

FLEMING INVESTMENT ADVISERS
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 25,000				$ 25,000				$ 25,000	
Accounts Receivable	51,000		e. $ 9,000		60,000				60,000	
Office Supplies	7,500			$ 4,500 b.	3,000				3,000	
Equipment	26,000				26,000				26,000	
Accum. Dep.—Eq.		$ 19,000		3,000 c.		$ 22,000				$ 22,000
Accounts Payable		14,000				14,000				14,000
Salaries Payable				4,500 d.		4,500				4,500
Unearned Revenue		4,500	a. 700			3,800				3,800
Notes Payable		26,000				26,000				26,000
Common Stock		15,000				15,000				15,000
Retained Earnings		5,500				5,500				5,500
Dividends	28,000				28,000				28,000	
Service Revenue		99,000		700 a.		108,700		$ 108,700		
				9,000 e.						
Insurance Expense	2,500				2,500		$ 2,500			
Salaries Expense	33,000		d. 4,500		37,500		37,500			
Supplies Expense			b. 4,500		4,500		4,500			
Interest Expense	3,000				3,000		3,000			
Rent Expense	7,000				7,000		7,000			
Depreciation Expense—Eq.			c. 3,000		3,000		3,000			
Total	$ 183,000	$ 183,000	$ 21,700	$ 21,700	$ 199,500	$ 199,500	$ 57,500	$ 108,700	$ 142,000	$ 90,800
						Net Income	51,200			51,200
Total							$ 108,700	$ 108,700	$ 142,000	$ 142,000

P4-37B, cont.
Requirement 2

FLEMING INVESTMENT ADVISERS
Income Statement
Year Ended December 31, 2018

Revenues:		
Service Revenue		$ 108,700
Expenses:		
Insurance Expense	$ 2,500	
Salaries Expense	37,500	
Supplies Expense	4,500	
Interest Expense	3,000	
Rent Expense	7,000	
Depreciation Expense—Equipment	3,000	
Total Expenses		57,500
Net Income		$ 51,200

FLEMING INVESTMENT ADVISERS
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 5,500
Net income for the year	51,200
	56,700
Dividends	(28,000)
Retained Earnings, December 31, 2018	$ 28,700

P4-37B, cont.
Requirement 2, cont.

FLEMING INVESTMENTS ADVISERS
Balance Sheet
December 31, 2018

Assets			Liabilities		
Current Assets:			Current Liabilities:		
Cash	$ 25,000		Accounts Payable	$ 14,000	
Accounts Receivable	60,000		Salaries Payable	4,500	
Office Supplies	3,000		Unearned Revenue	3,800	
Total Current Assets		$ 88,000	Total Current Liabilities		$ 22,300
Property, Plant, and Equipment:			Long-Term Liabilities:		
Equipment	26,000		Notes Payable		26,000
Less: Acc. Depr.—Eq.	(22,000)		Total Liabilities		48,300
Total Property, Plant, and Equipment		4,000			
			Stockholders' Equity		
			Common Stock	15,000	
			Retained Earnings	28,700	
			Total Stockholders' Equity		43,700
Total Assets		$ 92,000	Total Liabilities and Stockholders' Equity		$ 92,000

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	108,700	
	Income Summary		108,700
	To close revenue.		
31	Income Summary	57,500	
	Insurance Expense		2,500
	Salaries Expense		37,500
	Supplies Expense		4,500
	Interest Expense		3,000
	Rent Expense		7,000
	Depreciation Expense—Equipment		3,000
	To close expenses.		
31	Income Summary	51,200	
	Retained Earnings		51,200
	To close Income Summary.		
31	Retained Earnings	28,000	
	Dividends		28,000
	To close dividends.		

P4-38B
Requirements 1, 3, and 6

Cash

Bal.	13,560		
Bal.	13,560		

Accounts Receivable

Bal.	17,000		
Bal.	17,000		

Prepaid Rent

Bal.	2,140		
		140	Adj.
Bal.	2,000		

Office Supplies

Bal.	2,800		
		600	Adj.
Bal.	2,200		

Equipment

Bal.	30,000		
Bal.	30,000		

Accumulated Depreciation—Eq.

		11,000	Bal.
		400	Adj.
		11,400	Bal.

Common Stock

		12,000	Bal.
		12,000	Bal.

Retained Earnings

		17,600	Bal.
Clos.	4,600	17,380	Clos.
		30,380	Bal.

Dividends

Bal.	4,600		
		4,600	Clos.
Bal.	0		

Income Summary

Clos.	3,620	21,000	Clos.
Clos.	17,380	17,380	Bal.
		0	Bal.

Service Revenue

		19,000	Bal.
		2,000	Adj.
Clos.	21,000	21,000	Bal.
Bal.	0		

Salaries Expense

Bal.	2,300		
Adj.	180		
Bal.	2,480	2,480	Clos.
Bal.	0		

Rent Expense

Bal.	0		
Adj.	140		
Bal.	140	140	Clos.
Bal.	0		

P4-38B, cont.

Requirement 1, 3, and 6, cont.

Accounts Payable

		7,200	Bal.
		7,200	Bal.

Depreciation Expense—Equip.

Bal.	0		
Adj.	400		
Bal.	400	400	Clos.
Bal.	0		

Salaries Payable

		0	Bal.
		180	Adj.
		180	Bal.

Supplies Expense

Bal.	0		
Adj.	600		
Bal.	600	600	Clos.
Bal.	0		

Unearned Revenue

		5,600	Bal.
Adj.	2,000		
		3,600	Bal.

P4-38B, cont.
Requirement 2

WATSON ANVILS
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 13,560				$ 13,560				$ 13,560	
Accounts Receivable	17,000				17,000				17,000	
Prepaid Rent	2,140			$ 140 b.	2,000				2,000	
Office Supplies	2,800			600 c.	2,200				2,200	
Equipment	30,000				30,000				30,000	
Acc. Depreciation—Eq.		$ 11,000		400 d.		$ 11,400				$ 11,400
Accounts Payable		7,200				7,200				7,200
Salaries Payable				180 e.		180				180
Unearned Revenue		5,600	a. $ 2,000			3,600				3,600
Common Stock		12,000				12,000				12,000
Retained Earnings		17,600				17,600				17,600
Dividends	4,600				4,600				4,600	
Service Revenue		19,000		2,000 a.		21,000		$ 21,000		
Salaries Expense	2,300		e. 180		2,480		$ 2,480			
Rent Expense			b. 140		140		140			
Deprn Expense—Eq.			d. 400		400		400			
Supplies Expense			c. 600		600		600			
Total	$ 72,400	$ 72,400	$ 3,320	$ 3,320	$ 72,980	$ 72,980	$ 3,620	$ 21,000	$ 69,360	$ 51,980
						Net Income	17,380			17,380
Total							$ 21,000	$ 21,000	$ 69,360	$ 69,360

P4-38B, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	2,000	
	Service Revenue		2,000
	To adjust revenue earned.		
31	Rent Expense	140	
	Prepaid Rent		140
	To adjust rent expense		
31	Supplies Expense	600	
	Office Supplies		600
	To adjust office supplies		
31	Depreciation Expense—Equipment	400	
	Accumulated Depreciation—Equipment		400
	To adjust depreciation		
31	Salaries Expense	180	
	Salaries Payable		180
	To adjust accrued salaries		

P4-38B, cont.
Requirement 4

WATSON ANVILS Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 13,560	
Accounts Receivable	17,000	
Prepaid Rent	2,000	
Office Supplies	2,200	
Equipment	30,000	
Accumulated Depreciation—Equipment		$ 11,400
Accounts Payable		7,200
Salaries Payable		180
Unearned Revenue		3,600
Common Stock		12,000
Retained Earnings		17,600
Dividends	4,600	
Service Revenue		21,000
Salaries Expense	2,480	
Rent Expense	140	
Depreciation Expense—Equipment	400	
Supplies Expense	600	
Total	$ 72,980	$ 72,980

P4-38B, cont.
Requirement 5

WATSON ANVILS Income Statement Year Ended December 31, 2018		
Revenues:		
Service Revenue		$ 21,000
Expenses:		
Salaries Expense	$ 2,480	
Supplies Expense	600	
Rent Expense	140	
Depreciation Expense—Equipment	400	
Total Expenses		3,620
Net Income		$ 17,380

WATSON ANVILS Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 17,600
Net income for the year	17,380
	34,980
Dividends	(4,600)
Retained Earnings, December 31, 2018	$ 30,380

P4-38B, cont.
Requirement 5, cont.

WATSON ANVILS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 13,560	
Accounts Receivable	17,000	
Prepaid Rent	2,000	
Office Supplies	2,200	
Total Current Assets		$ 34,760
Property, Plant, and Equipment:		
Equipment	30,000	
Less: Accumulated Depreciation—Equipment	(11,400)	
Total Property, Plant, and Equipment		18,600
Total Assets		$ 53,360
Liabilities		
Current Liabilities:		
Accounts Payable	$ 7,200	
Salaries Payable	180	
Unearned Revenue	3,600	
Total Current Liabilities		$ 10,980
Total Liabilities		10,980
Stockholders' Equity		
Common Stock	12,000	
Retained Earnings	30,380	
Total Stockholders' Equity		42,380
Total Liabilities and Stockholders' Equity		$ 53,360

P4-38B, cont., Requirement 6

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	21,000	
	Income Summary		21,000
	To close revenue.		
31	Income Summary	3,620	
	Salaries Expense		2,480
	Rent Expense		140
	Depreciation Expense—Equipment		400
	Supplies Expense		600
	To close expenses.		
31	Income Summary	17,380	
	Retained Earnings		17,380
	To close Income Summary.		
31	Retained Earnings	4,600	
	Dividends		4,600
	To close dividends.		

Requirement 7

WATSON ANVILS
Post-Closing Trial Balance
December 31, 2018

Account Title	Balance	
	Debit	Credit
Cash	$ 13,560	
Accounts Receivable	17,000	
Prepaid Rent	2,000	
Office Supplies	2,200	
Equipment	30,000	
Accumulated Depreciation—Equipment		$ 11,400
Accounts Payable		7,200
Salaries Payable		180
Unearned Revenue		3,600
Common Stock		12,000
Retained Earnings		30,380
Total	$ 64,760	$ 64,760

Requirement 8

Current ratio = Total current assets* / Total current liabilities*
= $34,760 / $10,980 = 3.17

*From the balance sheet

P4-39B
Requirement 1

Date	Accounts	Debit	Credit
Dec. 1	Cash	63,000	
	Common Stock		63,000
1	Equipment	14,400	
	Cash		14,400
1	Prepaid Insurance	3,600	
	Cash		3,600
9	Land	15,000	
	Cash		15,000
10	Office Supplies	2,200	
	Accounts Payable		2,200
19	Cash	24,000	
	Notes Payable		24,000
22	Advertising Expense	2,000	
	Cash		2,000
26	Accounts Payable	1,000	
	Cash		1,000
28	Utilities Expense	260	
	Utilities Payable		260
31	Cash	18,500	
	Accounts Receivable	3,800	
	Service Revenue		22,300
31	Salaries Expense	3,900	
	Rent Expense	800	
	Cash		4,700
31	Cash	1,380	
	Unearned Revenue		1,380
31	Dividends	5,000	
	Cash		5,000

P4-39B, cont., Requirements 1, 4, and 7

Cash

Dec. 1	63,000	14,400	Dec. 1
Dec. 19	24,000	3,600	Dec. 1
Dec. 31	18,500	15,000	Dec. 9
Dec. 31	1,380	2,000	Dec. 22
		1,000	Dec. 26
		4,700	Dec. 31
		5,000	Dec. 31
Bal.	61,180		

Dividends

Dec. 31	5,000		
		5,000	Clos.
Bal.	0		

Income Summary

Clos.	8,220	22,300	Clos.
Clos.	14,080	14,080	Bal.
		0	Bal.

Accounts Receivable

Dec. 31	3,800		
Bal.	3,800		

Service Revenue

		22,300	Dec. 31
Clos.	22,300		
		0	Bal.

Office Supplies

Dec. 10	2,200		
		600	Adj.
Bal.	1,600		

Salaries Expense

Dec. 31	3,900		
		3,900	Clos.
Bal.	0		

Prepaid Insurance

Dec. 1	3,600		
		300	Adj.
Bal.	3,300		

Rent Expense

Dec. 31	800		
		800	Clos.
Bal.	0		

Land

Dec. 9	15,000		
Bal.	15,000		

Utilities Expense

Dec. 28	260		
		260	Clos.
Bal.	0		

Equipment

Dec. 1	14,400		
Bal.	14,400		

Advertising Expense

Dec. 22	2,000		
		2,000	Clos.
Bal.	0		

Accumulated Depreciation—Equipment

		240	Adj.
		240	Bal.

Supplies Expense

Adj.	600		
		600	Clos.
Bal.	0		

P4-39B, cont.
Requirements 1, 4, and 7, cont.

Accounts Payable

		2,200	Dec. 10
Dec. 26	1,000		
		1,200	Bal.

Insurance Expense

Adj.	300		
		300	Clos.
Bal.	0		

Utilities Payable

		260	Dec. 28
		260	Bal.

Interest Expense

Adj.	120		
		120	Clos.
Bal.	0		

Interest Payable

		120	Adj.
		120	Bal.

Depreciation Expense—Equipment

Adj.	240		
		240	Clos.
Bal.	0		

Unearned Revenue

		1,380	Dec. 31
		1,380	Bal.

Notes Payable

		24,000	Dec. 19
		24,000	Bal.

Common Stock

		63,000	Dec. 1
		63,000	Bal.

Retained Earnings

		0	Dec. 1
Clos.	5,000	14,080	Clos.
		9,080	Bal.

P4-39B, cont.
Requirement 2

WILSON'S QUALITY AUTOMOTIVE Unadjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 61,180	
Accounts Receivable	3,800	
Office Supplies	2,200	
Prepaid Insurance	3,600	
Land	15,000	
Equipment	14,400	
Accounts Payable		$ 1,200
Utilities Payable		260
Unearned Revenue		1,380
Notes Payable		24,000
Common Stock		63,000
Dividends	5,000	
Service Revenue		22,300
Salaries Expense	3,900	
Rent Expense	800	
Utilities Expense	260	
Advertising Expense	2,000	
Total	$ 112,140	$ 112,140

P4-39B, cont.
Requirement 3

WILSON'S QUALITY AUTOMOTIVE
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments				Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit		Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 61,180						$ 61,180				$ 61,180	
Accounts Receivable	3,800						3,800				3,800	
Office Supplies	2,200				$ 600	a.	1,600				1,600	
Prepaid Insurance	3,600				300	c.	3,300				3,300	
Land	15,000						15,000				15,000	
Equipment	14,400						14,400				14,400	
Acc. Dep.—Equipment					240	b.		$ 240				$ 240
Accounts Payable		$ 1,200						1,200				1,200
Utilities Payable		260						260				260
Interest Payable					120	d.		120				120
Unearned Revenue		1,380						1,380				1,380
Notes Payable		24,000						24,000				24,000
Common Stock		63,000						63,000				63,000
Dividends	5,000						5,000				5,000	
Service Revenue		22,300						22,300		$ 22,300		
Salaries Expense	3,900						3,900		$ 3,900			
Rent Expense	800						800		800			
Utilities Expense	260						260		260			
Advertising Expense	2,000						2,000		2,000			
Supplies Expense			a.	$ 600			600		600			
Insurance Expense			c.	300			300		300			
Interest Expense			d.	120			120		120			
Dep. Exp.—Equipment			b.	240			240		240			
Total	$ 112,140	$ 112,140		$ 1,260	$ 1,260		$ 112,500	$ 112,500	$ 8,220	$ 22,300	$ 104,280	$ 90,200
								Net Income	14,080			14,080
Total									$ 22,300	$ 22,300	$ 104,280	$ 104,280

P4-39B, cont.
Requirement 4

Date	Accounts	Debit	Credit
Dec.31	Supplies Expense	600	
	Office Supplies		600
	To adjust office supplies used.		
31	Depreciation Expense—Equipment	240	
	Accumulated Depreciation—Equipment		240
	To adjust for depreciation.		
31	Insurance Expense	300	
	Prepaid Insurance		300
	To adjust for insurance expired.		
31	Interest Expense	120	
	Interest Payable		120
	To adjust for accrued interest.		

P4-39B, cont.
Requirement 5

WILSON'S QUALITY AUTOMOTIVE Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 61,180	
Accounts Receivable	3,800	
Office Supplies	1,600	
Prepaid Insurance	3,300	
Land	15,000	
Equipment	14,400	
Accumulated Depreciation—Equipment		$ 240
Accounts Payable		1,200
Utilities Payable		260
Interest Payable		120
Unearned Revenue		1,380
Notes Payable		24,000
Common Stock		63,000
Dividends	5,000	
Service Revenue		22,300
Salaries Expense	3,900	
Rent Expense	800	
Utilities Expense	260	
Advertising Expense	2,000	
Supplies Expense	600	
Insurance Expense	300	
Interest Expense	120	
Depreciation Expense—Equipment	240	
Total	$ 112,500	$ 112,500

P4-39B, cont.
Requirement 6

WILSON'S QUALITY AUTOMOTIVE
Income Statement
Month Ended December 31, 2018

Revenues:		
Service Revenue		$ 22,300
Expenses:		
Salaries Expense	$ 3,900	
Rent Expense	800	
Utilities Expense	260	
Advertising Expense	2,000	
Supplies Expense	600	
Insurance Expense	300	
Interest Expense	120	
Depreciation Expense—Equipment	240	
Total Expenses		8,220
Net Income		$ 14,080

WILSON'S QUALITY AUTOMOTIVE
Statement of Retained Earnings
Month Ended December 31, 2018

Retained Earnings, December 1, 2018	$ 0
Net income for the month	14,080
	14,080
Dividends	(5,000)
Retained Earnings, December 31, 2018	$ 9,080

P4-39B, cont.
Requirement 6, cont.

WILSON'S QUALITY AUTOMOTIVE			
Balance Sheet			
December 31, 2018			
Assets			
Current Assets:			
Cash		$ 61,180	
Accounts Receivable		3,800	
Office Supplies		1,600	
Prepaid Insurance		3,300	
Total Current Assets			$ 69,880
Property, Plant, and Equipment:			
Land		15,000	
Equipment	$ 14,400		
Less: Accumulated Depreciation—Equipment	(240)	14,160	
Total Property, Plant, and Equipment			29,160
Total Assets			$ 99,040
Liabilities			
Current Liabilities:			
Accounts Payable		$ 1,200	
Utilities Payable		260	
Interest Payable		120	
Unearned Revenue		1,380	
Total Current Liabilities			$ 2,960
Long-term Liabilities:			
Notes Payable			24,000
Total Liabilities			26,960
Stockholders' Equity			
Common Stock		63,000	
Retained Earnings		9,080	
Total Stockholders' Equity			72,080
Total Liabilities and Stockholders' Equity			$ 99,040

P4-39B, cont.
Requirement 7

Date	Accounts	Debit	Credit
Dec.31	Service Revenue	22,300	
	Income Summary		22,300
	To close revenue.		
31	Income Summary	8,220	
	Salaries Expense		3,900
	Rent Expense		800
	Utilities Expense		260
	Advertising Expense		2,000
	Supplies Expense		600
	Insurance Expense		300
	Interest Expense		120
	Depreciation Expense—Equipment		240
	To close the expenses.		
31	Income Summary	14,080	
	Retained Earnings		14,080
	To close income summary.		
31	Retained Earnings	5,000	
	Dividends		5,000
	To close dividends.		

P4-39B, cont.
Requirement 8

WILSON'S QUALITY AUTOMOTIVE Post-Closing Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 61,180	
Accounts Receivable	3,800	
Office Supplies	1,600	
Prepaid Insurance	3,300	
Land	15,000	
Equipment	14,400	
Accumulated Depreciation—Equipment		$ 240
Accounts Payable		1,200
Utilities Payable		260
Interest Payable		120
Unearned Revenue		1,380
Notes Payable		24,000
Common Stock		63,000
Retained Earnings		9,080
Total	$ 99,280	$ 99,280

P4A-40B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Equipment	1,700	
	Accumulated Depreciation—Equipment		1,700
	To adjust depreciation.		
31	Wages Expense	1,300	
	Wages Payable		1,300
	To adjust accrued wages.		
31	Supplies Expense	600	
	Office Supplies		600
	To adjust office supplies.		
31	Insurance Expense	250	
	Prepaid Insurance		250
	To adjust insurance.		
31	Unearned Revenue	4,200	
	Service Revenue		4,200
	To adjust revenue earned.		
31	Accounts Receivable	1,000	
	Service Revenue		1,000
	To adjust accrued revenue.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Wages Payable	1,300	
	Wages Expense		1,300
	To reverse accrued wages.		
1	Service Revenue	1,000	
	Accounts Receivable		1,000
	To reverse accrued revenue.		

P4A-40B, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Wages Expense	1,900	
	Cash		1,900
	To pay wages.		
10	Cash	1,700	
	Service Revenue		1,700
	Receipt of cash for revenue.		

Using Excel

P4-41

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P4-42

Requirement 1

CANYON CANOE RENTALS
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 12,125				$ 12,125				$ 12,125	
Accounts Receivable	5,750		f. 1,850		7,600				7,600	
Office Supplies	1,250			1,085 a.	165				165	
Prepaid Rent	3,000			1,000 b.	2,000				2,000	
Land	85,000				85,000				85,000	
Building	35,000				35,000				35,000	
Accu. Depr.—Building				500 c.		$ 500				$ 500
Canoes	12,000				12,000				12,000	
Accu. Depr.—Canoes				200 g.		350				350
				150 h.						
Accounts Payable		$ 3,050				3,050				3,050
Wages Payable				1,250 e.		1,250				1,250
Utilities Payable		295				295				295
Telephone Payable		325				325				325
Unearned Revenue		750	d. 400			350				350
Interest Payable				50 i.		50				50
Notes Payable		7,200				7,200				7,200
Common Stock		136,000				136,000				136,000
Dividends	450				450				450	
Canoe Rental Revenue		12,400		400 d.		14,650		$ 14,650		
				1,850 f.						
Rent Expense	1,200		b. 1,000		2,200		$ 2,200			
Wages Expense	3,300		e. 1,250		4,550		4,550			
Utilities Expense	445				445		445			
Telephone Expense	500				500		500			
Supplies Expense			a. 1,085		1,085		1,085			
Dep. Expense—Building			c. 500		500		500			
Dep. Expense—Canoes			g. 200		350		350			
			h. 150							
Interest Expense			i. 50		50		50			
Total	$ 160,020	$ 160,020	$ 6,485	$ 6,485	$ 164,020	$ 164,020	$ 9,680	$ 14,650	$ 154,340	$ 149,370
						Net Income	4,970			4,970
Total							$ 14,650	$ 14,650	$ 154,340	$ 154,340

P4-42, cont.
Requirement 2

CANYON CANOE COMPANY
Income Statement
Two Months Ended December 31, 2018

Revenues:		
Canoe Rental Revenue		$ 14,650
Expenses:		
Rent Expense	$ 2,200	
Wages Expense	4,550	
Utilities Expense	445	
Telephone Expense	500	
Supplies Expense	1,085	
Dep. Expense—Building	500	
Dep. Expense—Canoes	350	
Interest Expense	50	
Total expenses		9,680
Net Income		$ 4,970

Requirement 3

CANYON CANOE COMPANY
Statement of Retained Earnings
Two Months Ended December 31, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the two months	4,970
	4,970
Dividends	(450)
Retained Earnings, December 31, 2018	$ 4,520

P4-42, cont., Requirement 4

CANYON CANOE COMPANY			
Balance Sheet			
December 31, 2018			
Assets			
Current Assets:			
Cash		$ 12,125	
Accounts Receivable		7,600	
Office Supplies		165	
Prepaid Rent		2,000	
Total Current Assets			$ 21,890
Property, Plant, and Equipment:			
Land		85,000	
Building	$ 35,000		
Less: Accu. Depr.—Building	(500)	34,500	
Canoes	12,000		
Less: Accu. Depr.—Canoes	(350)	11,650	
Total Plant Assets			131,150
Total Assets			$ 153,040
Liabilities			
Current Liabilities:			
Accounts Payable		$ 3,050	
Wages Payable		1,250	
Utilities Payable		295	
Telephone Payable		325	
Unearned Revenue		350	
Interest Payable		50	
Total Current Liabilities			$ 5,320
Long-term Liabilities			
Notes Payable			7,200
Total Liabilities			12,520
Stockholders' Equity			
Common Stock		136,000	
Retained Earnings		4,520	
Total Stockholders' Equity			140,520
Total Liabilities and Stockholders' Equity			$ 153,040

P4-42, cont.

Requirement 5

Date	Accounts	Debit	Credit
Dec. 31	Canoe Rental Revenue	14,650	
	Income Summary		14,650
	To close revenue.		
31	Income Summary	9,680	
	Rent Expense		2,200
	Wages Expense		4,550
	Utilities Expense		445
	Telephone Expense		500
	Supplies Expense		1,085
	Dep. Expense—Building		500
	Dep. Expense—Canoes		350
	Interest Expense		50
	To close expenses.		
31	Income Summary	4,970	
	Retained Earnings		4,970
	To close income summary.		
31	Retained Earnings	450	
	Dividends		450
	To close dividends.		

P4-42, cont., Requirement 5, cont.

Cash

Nov. 1	16,000	1,200	Nov. 2
Nov. 7	1,400	1,500	Nov. 13
Nov. 28	750	50	Nov. 15
Dec. 9	4,500	1,000	Nov. 26
Dec. 16	750	100	Nov. 30
		3,000	Dec. 1
		325	Dec. 18
		2,000	Dec. 19
		1,800	Dec. 31
		300	Dec. 31
Balance	12,125		

Accounts Payable

Nov. 26	1,000	4,800	Nov. 3
Dec. 19	2,000	750	Nov. 4
		500	Dec. 4
		3,050	Balance

Wages Payable

		1,250	Adj.
		1,250	Balance

Interest Payable

		50	Adj.
		50	Balance

Accounts Receivable

Nov. 22	3,000	750	Nov. 28
Dec. 15	3,500		
Adj.	1,850		
Balance	7,600		

Utilities Payable

Dec. 18	150	150	Nov. 16
		295	Dec. 20
		295	Balance

Office Supplies

Nov. 4	750		
Dec. 4	500	1,085	Adj.
Balance	165		

Telephone Payable

Dec. 18	175	175	Nov. 20
		325	Dec. 20
		325	Balance

Prepaid Rent

Dec. 1	3,000	1,000	Adj.
Balance	2,000		

Unearned Revenue

Adj.	400	750	Dec. 16
		350	Balance

Land

Dec. 1	85,000		
Balance	85,000		

Notes Payable

		7,200	Dec. 2
		7,200	Balance

Building

Dec. 1	35,000		
Balance	35,000		

Common Stock

		16,000	Nov. 1
		120,000	Dec. 1
		136,000	Balance

Accumulated Depreciation—Building

		500	Adj.
		500	Balance

Dividends

Nov. 15	50		
Nov. 30	100		
Dec. 31	300		
Balance	450		
		450	Clos.
		0	Balance

P4-42, cont., Requirement 5, cont.

Canoes

Nov. 3	4,800		
Dec. 2	7,200		
Balance	12,000		

Accumulated Depreciation—Canoes

		200	Adj.
		150	Adj.
		350	Balance

Canoe Rental Revenue

		1,400	Nov. 7
		3,000	Nov. 22
		4,500	Dec. 9
		3,500	Dec. 15
		400	Adj.
		1,850	Adj.
		14,650	Balance
Clos.	14,650		
		0	Balance

Retained Earnings

		0	Balance
Clos.	450	4,970	Clos.
		4,520	Balance

Rent Expense

Nov. 2	1,200		
Adj.	1,000		
Balance	2,200		
		2,200	Clos.
Balance	0		

Income Summary

Clos.	9,680	14,650	Clos.
Clos.	4,970		
		0	Balance

Wages Expense

Nov. 13	1,500		
Dec. 31	1,800		
Adj.	1,250		
Balance	4,550		
		4,550	Clos.
Balance	0		

Depreciation Expense—Building

Adj.	500		
Balance	500		
		500	Clos.
Balance	0		

Utilities Expense

Nov. 16	150		
Dec. 20	295		
Balance	445		
		445	Clos.
Balance	0		

Depreciation Expense—Canoes

Adj.	200		
Adj.	150		
Balance	350		
		350	Clos.
Balance	0		

Telephone Expense

Nov. 20	175		
Dec. 20	325		
Balance	500		
		500	Clos.
Balance	0		

Interest Expense

Adj.	50		
Balance	50		
		50	Clos.
Balance	0		

Supplies Expense

Adj.	1,085		
Balance	1,085		
		1,085	Clos.
Balance	0		

P4-42, cont.
Requirement 6

CANYON CANOE COMPANY Post-Closing Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	$ 12,125	
Accounts Receivable	7,600	
Office Supplies	165	
Prepaid Rent	2,000	
Land	85,000	
Building	35,000	
Accumulated Depreciation—Building		$ 500
Canoes	12,000	
Accumulated Depreciation—Canoes		350
Accounts Payable		3,050
Utilities Payable		295
Telephone Payable		325
Unearned Revenue		350
Wages Payable		1,250
Interest Payable		50
Notes Payable		7,200
Common Stock		136,000
Retained Earnings		4,520
Total	$ 153,890	$ 153,890

Practice Set

P4-43, Requirement 1

CRYSTAL CLEAR CLEANING
Worksheet
November 30, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 51,650				$ 51,650				$ 51,650	
Accounts Receivable	4,000				4,000				4,000	
Cleaning Supplies	320			$ 270 a.	50				50	
Prepaid Rent	4,000			1,000 d.	3,000				3,000	
Prepaid Insurance	4,800			400 e.	4,400				4,400	
Equipment	5,400				5,400				5,400	
Truck	3,000				3,000				3,000	
Acc. Dep.				150 b.		$ 150				$ 150
Accounts Payable		$ 1,245				1,245				1,245
Unearned Revenue		15,000	f. $ 625			14,375				14,375
Interest Payable				59 c.		59				59
Notes Payable		36,000				36,000				36,000
Common Stock		18,000				18,000				18,000
Dividends	1,400				1,400				1,400	
Service Revenue		5,100		625 f.		5,725		$ 5,725		
Salaries Expense	400				400		$ 400			
Advertising Expense	200				200		200			
Utilities Expense	175				175		175			
Supplies Expense			a. 270		270		270			
Depreciation Expense			b. 150		150		150			
Rent Expense			d. 1,000		1,000		1,000			
Insurance Expense			e. 400		400		400			
Interest Expense			c. 59		59		59			
Total	$ 75,345	$ 75,345	$ 2,504	$ 2,504	$ 75,554	$ 75,554	$ 2,654	$ 5,725	$ 72,900	$ 69,829
						Net Income	3,071			3,071
Total							$ 5,725	$ 5,725	$ 72,900	$ 72,900

P4-43, cont.
Requirement 2

CRYSTAL CLEAR CLEANING
Income Statement
Month Ended November 30, 2018

Revenues:		
Service Revenue		$ 5,725
Expenses:		
Salaries Expense	$ 400	
Advertising Expense	200	
Utilities Expense	175	
Supplies Expense	270	
Depreciation Expense	150	
Rent Expense	1,000	
Insurance Expense	400	
Interest Expense	59	
Total Expenses		2,654
Net Income		$ 3,071

CRYSTAL CLEAR CLEANING
Statement of Retained Earnings
Month Ended November 30, 2018

Retained Earnings, November 1, 2018	$ 0
Net income for the month	3,071
	3,071
Dividends	(1,400)
Retained Earnings November 30, 2018	$ 1,671

P4-43, cont.

Requirement 2, cont.

CRYSTAL CLEAR CLEANING Balance Sheet November 30, 2018		
Assets		
Current Assets:		
Cash	$ 51,650	
Accounts Receivable	4,000	
Cleaning Supplies	50	
Prepaid Rent	3,000	
Prepaid Insurance	4,400	
Total Current Assets		$ 63,100
Property, Plant, and Equipment		
Equipment	5,400	
Truck	3,000	
Less: Accumulated Depreciation	(150)	
Total Property, Plant, and Equipment		8,250
Total Assets		$ 71,350
Liabilities		
Current Liabilities:		
Accounts Payable	$ 1,245	
Unearned Revenue	14,375	
Interest Payable	59	
Total Current Liabilities		$ 15,679
Long-term Liabilities:		
Notes Payable		36,000
Total Liabilities		51,679
Stockholders' Equity		
Common Stock	18,000	
Retained Earnings	1,671	
Total Stockholders' Equity		19,671
Total Liabilities and Stockholders' Equity		$ 71,350

P4-43, cont.

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Nov. 30	Service Revenue	5,725	
	Income Summary		5,725
	To close revenue.		
30	Income Summary	2,654	
	Salaries Expense		400
	Advertising Expense		200
	Utilities Expense		175
	Supplies Expense		270
	Depreciation Expense		150
	Rent Expense		1,000
	Insurance Expense		400
	Interest Expense		59
	To close expenses.		
30	Income Summary	3,071	
	Retained Earnings		3,071
	To close Income Summary.		
30	Retained Earnings	1,400	
	Dividends		1,400
	To close dividends.		

P4-43, cont., Requirement 3, cont.

Cash

Nov. 1	15,000	4,000	Nov. 2
Nov. 10	200	4,800	Nov. 3
Nov. 16	15,000	3,900	Nov. 7
Nov. 17	400	400	Nov. 15
Nov. 20	36,000	750	Nov. 25
Nov. 21	500	200	Nov. 29
		1,400	Nov. 30
Balance	51,650		

Accounts Payable

Nov. 25	750	320	Nov. 4
		1,500	Nov. 5
		175	Nov. 18
		1,245	Balance

Unearned Revenue

Adj.	625	15,000	Nov. 16
		14,375	Balance

Accounts Receivable

Nov. 9	4,700	200	Nov. 10
		500	Nov. 21
Balance	4,000		

Interest Payable

		59	Adj.
		59	Balance

Cleaning Supplies

Nov. 4	320	270	Adj.
Balance	50		

Notes Payable

		36,000	Nov. 20
		36,000	Balance

Prepaid Rent

Nov. 2	4,000	1,000	Adj.
Balance	3,000		

Common Stock

		18,000	Nov. 1
		18,000	Balance

Prepaid Insurance

Nov. 3	4,800	400	Adj.
Balance	4,400		

Retained Earnings

Clos.	1,400	3,071	Clos.
		1,671	Balance

Equipment

Nov. 5	1,500		
Nov. 7	3,900		
Balance	5,400		

Income Summary

Clos.	2,654	5,725	Clos.
Clos.	3,071		
Balance	0		

Dividends

Nov. 30	1,400	1,400	Clos.
Balance	0		

Truck

Nov. 1	3,000		
Balance	3,000		

Service Revenue

Clos.	5,725	4,700	Nov. 9
		400	Nov. 17
		625	Adj.
		0	Balance

Accumulated Depreciation

		150	Adj.
		150	Balance

P4-43, cont.
Requirement 3, cont.

Salaries Expense

Nov. 15	400	400	Clos.
Balance	0		

Advertising Expense

Nov. 29	200	200	Clos.
Balance	0		

Utilities Expense

Nov. 18	175	175	Clos.
Balance	0		

Supplies Expense

Adj.	270	270	Clos.
Balance	0		

Depreciation Expense

Adj.	150	150	Clos.
Balance	0		

Rent Expense

Adj.	1,000	1,000	Clos.
Balance	0		

Insurance Expense

Adj.	400	400	Clos.
Balance	0		

Interest Expense

Adj.	59	59	Clos.
Balance	0		

P4-43, cont.
Requirement 4

CRYSTAL CLEAR CLEANING
Post-Closing Trial Balance
November 30, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 51,650	
Accounts Receivable	4,000	
Cleaning Supplies	50	
Prepaid Rent	3,000	
Prepaid Insurance	4,400	
Equipment	5,400	
Truck	3,000	
Accumulated Depreciation		$ 150
Accounts Payable		1,245
Unearned Revenue		14,375
Interest Payable		59
Notes Payable		36,000
Common Stock		18,000
Retained Earnings		1,671
Total	$ 71,500	$ 71,500

Comprehensive Problem 1 for Chapters 1-4:

Requirement 1

Date	Accounts	Debit	Credit
Dec. 1	Cash	13,000	
	Truck	9,000	
	Common Stock		22,000
1	Prepaid Insurance	600	
	Cash		600
4	Office Supplies	750	
	Cash		750
12	Cash	2,200	
	Service Revenue		2,200
15	Accounts Receivable	3,300	
	Service Revenue		3,300
18	Salaries Expense	800	
	Cash		800
20	Cash	7,000	
	Service Revenue		7,000
22	Cash	2,200	
	Unearned Revenue		2,200
25	Cash	3,300	
	Accounts Receivable		3,300
27	Fuel Expense	150	
	Accounts Payable		150
28	Accounts Receivable	1,400	
	Service Revenue		1,400
29	Rent Expense	1,400	
	Cash		1,400

Comprehensive Problem 1, cont.
Requirement 1, cont.

Dec. 30	Accounts Payable	150	
	Cash		150
31	Dividends	2,500	
	Cash		2,500

Requirement 2, 5, 8

Cash

Dec. 1	13,000	600	Dec. 1
Dec. 12	2,200	750	Dec. 4
Dec. 20	7,000	800	Dec. 18
Dec. 22	2,200	1,400	Dec. 29
Dec. 25	3,300	150	Dec. 30
		2,500	Dec. 31
Bal.	21,500		

Accounts Payable

Dec. 30	150	150	Dec. 27
		0	Bal.

Salaries Payable

		800	Adj.
		800	Bal.

Accounts Receivable

Dec. 15	3,300	3,300	Dec. 25
Dec. 28	1,400		
Adj.	450		
Bal.	1,850		

Unearned Revenue

Adj.	700	2,200	Dec. 22
		1,500	Bal.

Common Stock

		22,000	Dec. 1
		22,000	Bal.

Office Supplies

Dec. 4	750	300	Adj.
Bal.	450		

Retained Earnings

		0	Balance
Clos.	2,500	11,400	Clos.
		8,900	Bal.

Prepaid Insurance

Dec. 1	600	100	Adj.
Bal.	500		

Dividends

Dec. 31	2,500	2,500	Clos.
Bal.	0		

Comprehensive Problem 1, cont.
Requirement 2, 5, 8, cont.

Truck

Dec. 1	9,000		
Bal.	9,000		

Income Summary

Clos.	3,650	15,050	Clos.
Clos.	11,400		
		0	Bal.

Accumulated Depreciation—Truck

		100	Adj.
		100	Bal.

Service Revenue

		2,200	Dec. 12
		3,300	Dec. 15
		7,000	Dec. 20
		1,400	Dec. 28
		700	Adj.
		450	Adj.
Clos.	15,050	15,050	Bal.
		0	Bal.

Salaries Expense

Dec. 18	800		
Adj.	800		
Bal.	1,600	1,600	Clos.
Bal.	0		

Depreciation Expense—Truck

Adj.	100		
Bal.	100	100	Clos.
Bal.	0		

Insurance Expense

Adj.	100		
Bal.	100	100	Clos.
Bal.	0		

Fuel Expense

Dec. 27	150		
Bal.	150	150	Clos.
Bal.	0		

Rent Expense

Dec. 29	1,400		
Bal.	1,400	1,400	Clos.
Bal.	0		

Comprehensive Problem 1
Requirement 2, 5, 8, cont.

Supplies Expense

Adj.	300		
Bal.	300	300	Clos.
Bal.	0		

Requirement 3

MURPHY DELIVERY SERVICE Unadjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 21,500	
Accounts Receivable	1,400	
Office Supplies	750	
Prepaid Insurance	600	
Truck	9,000	
Unearned Revenue		$ 2,200
Common Stock		22,000
Dividends	2,500	
Service Revenue		13,900
Salaries Expense	800	
Fuel Expense	150	
Rent Expense	1,400	
Total	$ 38,100	$ 38,100

Comprehensive Problem 1, cont.
Requirement 4

MURPHY DELIVERY SERVICE
Worksheet
December 31, 2018

Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 21,500				$ 21,500				$ 21,500	
Accounts Receivable	1,400		f. $ 450		1,850				1,850	
Office Supplies	750			$ 300 d.	450				450	
Prepaid Insurance	600			100 c.	500				500	
Truck	9,000				9,000				9,000	
Acc. Depreciation—Truck				100 b.		$ 100				$ 100
Accounts Payable										
Salaries Payable				800 a.		800				800
Unearned Revenue		$ 2,200	e. 700			1,500				1,500
Common Stock		22,000				22,000				22,000
Dividends	2,500				2,500				2,500	
Service Revenue		13,900		1,150 e., f.		15,050		$ 15,050		
Salaries Expense	800		a. 800		1,600		$ 1,600			
Depreciation Expense—Truck			b. 100		100		100			
Insurance Expense			c. 100		100		100			
Fuel Expense	150				150		150			
Rent Expense	1,400				1,400		1,400			
Supplies Expense			d. 300		300		300			
Total	$ 38,100	$ 38,100	$ 2,450	$ 2,450	$ 39,450	$ 39,450	$ 3,650	$ 15,050	$ 35,800	$ 24,400
						Net Income	11,400			11,400
Total							$ 15,050	$ 15,050	$ 35,800	$35,800

Comprehensive Problem 1, cont.
Requirement 5

Date	Accounts	Debit	Credit
a.	Salaries Expense	800	
	Salaries Payable		800
b.	Depreciation Expense—Truck	100	
	Accumulated Depreciation—Truck		100
c.	Insurance Expense	100	
	Prepaid Insurance		100
d.	Supplies Expense	300	
	Office Supplies		300
e.	Unearned Revenue	700	
	Service Revenue		700
f.	Accounts Receivable	450	
	Service Revenue		450

Comprehensive Problem 1, cont.
Requirement 6

MURPHY DELIVERY SERVICE Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 21,500	
Accounts Receivable	1,850	
Office Supplies	450	
Prepaid Insurance	500	
Truck	9,000	
Accumulated Depreciation—Truck		$ 100
Salaries Payable		800
Unearned Revenue		1,500
Common Stock		22,000
Dividends	2,500	
Service Revenue		15,050
Salaries Expense	1,600	
Depreciation Expense—Truck	100	
Insurance Expense	100	
Fuel Expense	150	
Rent Expense	1,400	
Supplies Expense	300	
Total	$ 39,450	$ 39,450

Comprehensive Problem 1, cont.
Requirement 7

MURPHY DELIVERY SERVICE
Income Statement
Month Ended December 31, 2018

Revenues:		
Service Revenue		$ 15,050
Expenses:		
Salaries Expense	$ 1,600	
Rent Expense	1,400	
Supplies Expense	300	
Fuel Expense	150	
Depreciation Expense—Truck	100	
Insurance Expense	100	
Total Expenses		3,650
Net Income		$ 11,400

MURPHY DELIVERY SERVICE
Statement of Retained Earnings
Month Ended December 31, 2018

Retained Earnings, December 1, 2018	$ 0
Net income for the month	11,400
	11,400
Dividends	(2,500)
Retained Earnings, December 31, 2018	$ 8,900

Comprehensive Problem 1, cont.
Requirement 7, cont.

MURPHY DELIVERY SERVICE
Balance Sheet
December 31, 2018

Assets		
Current Assets:		
Cash	$ 21,500	
Accounts Receivable	1,850	
Office Supplies	450	
Prepaid Insurance	500	
Total Current Assets		$ 24,300
Property, Plant, and Equipment:		
Truck	9,000	
Less: Accumulated Depreciation—Truck	(100)	
Total Property, Plant, and Equipment		8,900
Total Assets		$ 33,200
Liabilities		
Current Liabilities:		
Salaries Payable	$ 800	
Unearned Revenue	1,500	
Total Current Liabilities		$ 2,300
Total Liabilities		2,300
Stockholders' Equity		
Common Stock	22,000	
Retained Earnings	8,900	
Total Stockholders' Equity		30,900
Total Liabilities and Stockholders' Equity		$ 33,200

Comprehensive Problem 1, cont.
Requirement 8

Date	Accounts	Debit	Credit
Dec. 31	Service Revenue	15,050	
	Income Summary		15,050
31	Income Summary	3,650	
	Salaries Expense		1,600
	Depreciation Expense—Truck		100
	Insurance Expense		100
	Fuel Expense		150
	Rent Expense		1,400
	Supplies Expense		300
31	Income Summary	11,400	
	Retained Earnings		11,400
31	Retained Earnings	2,500	
	Dividends		2,500

Requirement 9

MURPHY DELIVERY SERVICE
Post-Closing Trial Balance
December 31, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 21,500	
Accounts Receivable	1,850	
Office Supplies	450	
Prepaid Insurance	500	
Truck	9,000	
Accumulated Depreciation—Truck		$ 100
Accounts Payable		0
Salaries Payable		800
Unearned Revenue		1,500
Common Stock		22,000
Retained Earnings		8,900
Total	$ 33,300	$ 33,300

Comprehensive Problem 2 for Chapters 1-4:

Requirement 1

Date	Accounts	Debit	Credit
Jan. 3	Cash	200	
	Accounts Receivable		200
5	Office Supplies	1,000	
	Accounts Payable		1,000
12	Cash	3,000	
	Service Revenue		3,000
15	Salaries Expense	3,300	
	Salaries Payable	800	
	Cash		4,100
18	Accounts Receivable	1,350	
	Service Revenue		1,350
20	Accounts Payable	300	
	Cash		300
24	Fuel Expense	200	
	Cash		200
27	Unearned Revenue	1,500	
	Service Revenue		1,500
28	Rent Expense	2,200	
	Cash		2,200
30	Cash	3,000	
	Unearned Revenue		3,000
31	Dividends	1,500	
	Cash		1,500

Comprehensive Problem 2, cont.
Requirement 2, 5

Cash

Bal.	21,500	4,100	Jan. 15
Jan. 3	200	300	Jan. 20
Jan. 12	3,000	200	Jan. 24
Jan. 30	3,000	2,200	Jan. 28
		1,500	Jan. 31
Bal.	19,400		

Accounts Payable

Jan. 20	300	1,000	Jan. 5
		700	Bal.

Salaries Payable

		800	Bal.
Jan. 15	800	500	Adj.
		500	Bal.

Accounts Receivable

Bal.	1,850	200	Jan. 3
Jan. 18	1,350		
Adj.	1,800		
Bal.	4,800		

Unearned Revenue

Jan. 27	1,500	1,500	Bal.
		3,000	Jan. 30
		3,000	Bal.

Office Supplies

Bal.	450		
Jan. 5	1,000	850	Adj.
Bal.	600		

Common Stock

		22,000	Bal.
		22,000	Bal.

Prepaid Insurance

Bal.	500		
		100	Adj.
Bal.	400		

Dividends

Jan. 31	1,500		
Bal.	1,500		

Truck

Bal.	9,000		
Bal.	9,000		

Retained Earnings

		8,900	Bal.
		8,900	Bal.

Accumulated Depreciation—Truck

		100	Bal.
		100	Adj.
		200	Bal.

Service Revenue

		3,000	Jan. 12
		1,350	Jan. 18
		1,500	Jan. 27
		1,800	Adj.
		7,650	Bal.

Comprehensive Problem 2, cont.
Requirement 2, 5, cont.

Salaries Expense

Jan. 15	3,300	
Adj.	500	
Bal.	3,800	

Depreciation Expense—Truck

Adj.	100	
Bal.	100	

Insurance Expense

Adj.	100	
Bal.	100	

Fuel Expense

Jan. 24	200	
Bal.	200	

Rent Expense

Jan. 28	2,200	
Bal.	2,200	

Supplies Expense

Adj.	850	
Bal.	850	

Comprehensive Problem 2, cont.
Requirement 3

MURPHY DELIVERY SERVICE
Unadjusted Trial Balance
January 31, 2019

Account Title	**Balance**	
	Debit	Credit
Cash	$ 19,400	
Accounts Receivable	3,000	
Office Supplies	1,450	
Prepaid Insurance	500	
Truck	9,000	
Accumulated Depreciation—Truck		$ 100
Accounts Payable		700
Salaries Payable		0
Unearned Revenue		3,000
Common Stock		22,000
Retained Earnings		8,900
Dividends	1,500	
Service Revenue		5,850
Salaries Expense	3,300	
Fuel Expense	200	
Rent Expense	2,200	
Total	$ 40,550	$ 40,550

MURPHY DELIVERY SERVICE
Worksheet
January 31, 2019

Account Names	**Unadjusted Trial Balance**		**Adjustments**		**Adjusted Trial Balance**		**Income Statement**		**Balance Sheet**	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 19,400				$ 19,400				$ 19,400	
Accounts Receivable	3,000		b. 1,800		4,800				4,800	
Office Supplies	1,450			$ 850 a.	600				600	
Prepaid Insurance	500			100 d.	400				400	
Truck	9,000				9,000				9,000	
Accumulated Depreciation—Truck		$ 100		100 e.		$ 200				$ 200
Accounts Payable		700				700				700
Salaries Payable				500 c.		500				500
Unearned Revenue		3,000				3,000				3,000
Common Stock		22,000				22,000				22,000
Retained Earnings		8,900				8,900				8,900
Dividends	1,500				1,500				1,500	
Service Revenue		5,850		1,800 b.		7,650		$ 7,650		
Salaries Expense	3,300		c. 500		3,800		$ 3,800			
Depreciation Expense—Truck			e. 100		100		100			
Insurance Expense			d. 100		100		100			
Fuel Expense	200				200		200			
Rent Expense	2,200				2,200		2,200			
Supplies Expense			a. 850		850		850			
Total	$ 40,550	$ 40,550	$ 3,350	$ 3,350	$ 42,950	$ 42,950	$ 7,250	$ 7,650	$ 35,700	$ 35,300
						Net Income	400			400
Total							$ 7,650	$ 7,650	$ 35,700	$ 35,700

Comprehensive Problem 2, cont.
Requirement 5

Date	Accounts	Debit	Credit
a.	Supplies Expense	850	
	Office Supplies		850
b.	Accounts Receivable	1,800	
	Service Revenue		1,800
c.	Salary Expense	500	
	Salary Payable		500
d.	Insurance Expense	100	
	Prepaid Insurance		100
e.	Depreciation Expense—Truck	100	
	Accumulated Depreciation—Truck		100

Comprehensive Problem 2, cont.
Requirement 6

MURPHYS DELIVERY SERVICE Adjusted Trial Balance January 31, 2019		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 19,400	
Accounts Receivable	4,800	
Office Supplies	600	
Prepaid Insurance	400	
Truck	9,000	
Accumulated Depreciation—Truck		$ 200
Accounts Payable		700
Salaries Payable		500
Unearned Revenue		3,000
Common Stock		22,000
Retained Earnings		8,900
Dividends	1,500	
Service Revenue		7,650
Salaries Expense	3,800	
Depreciation Expense—Truck	100	
Insurance Expense	100	
Fuel Expense	200	
Rent Expense	2,200	
Supplies Expense	850	
Total	$ 42,950	$ 42,950

Comprehensive Problem 2, cont.
Requirement 7

MURPHY DELIVERY SERVICE Income Statement Month Ended January 31, 2019		
Revenues:		
Service Revenue		$ 7,650
Expenses:		
Salaries Expense	$ 3,800	
Rent Expense	2,200	
Supplies Expense	850	
Fuel Expense	200	
Depreciation Expense—Truck	100	
Insurance Expense	100	
Total Expenses		7,250
Net Income		$ 400

MURPHY DELIVERY SERVICE Statement of Retained Earnings Month Ended January 31, 2019	
Retained Earnings, January 1, 2019	8,900
Net income for the month	400
	9,300
Dividends	(1,500)
Retained Earnings, January 31, 2019	$ 7,800

Comprehensive Problem 2, cont.
Requirement 7, cont.

MURPHY DELIVERY SERVICE
Balance Sheet
January 31, 2019

Assets		
Current Assets:		
Cash	$ 19,400	
Accounts Receivable	4,800	
Office Supplies	600	
Prepaid Insurance	400	
Total Current Assets		$ 25,200
Property, Plant, and Equipment:		
Truck	9,000	
Less: Accumulated Depreciation—Truck	(200)	
Total Property, Plant, and Equipment		8,800
Total Assets		$ 34,000
Liabilities		
Current Liabilities:		
Accounts Payable	$ 700	
Salaries Payable	500	
Unearned Revenue	3,000	
Total Current Liabilities		$ 4,200
Total Liabilities		4,200
Stockholders' Equity		
Common Stock	22,000	
Retained Earnings	7,800	
Total Stockholders' Equity		29,800
Total Liabilities and Stockholders' Equity		$ 34,000

Requirement 8

Return on Assets = Net income / Average total assets*
= $400 / $33,600 = 1.19%

*Average Total Assets = ($33,200 + $34,000) / 2 = $33,600

Debt ratio= Total liabilities / Total assets
= $4,200 / $34,000 = 0.124 or 12.4%

Current ratio= Total current assets / Total current liabilities
= $25,200 / $4,200 = 6.00

Tying It All Together Case 4-1

Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Revenue	4,328	
	Income Summary		4,328
	To close revenue.		
31	Income Summary	4,204	
	Selling, General, and Administrative Expense		4,005
	Other Expenses		61
	Interest Expense		68
	Income Tax Expense		70
	To close expenses.		
31	Income Summary	124	
	Retained Earnings		124
	To close Income Summary.		

Requirement 2

Ending balance of Retained Earnings: $2,289.

Retained Earnings

	2,165	Bal.
	124	Clos.
	2,289	Bal.

Requirement 3

Yes, the calculated ending balance of Retained Earnings from Requirement 2 ($2,289) matches with the Retained Earnings as of December 31, 2015 reported on Hyatt Hotels Corporation's balance sheet ($2,289).

Ethical Issue 4-1
Requirement 1

Date	Accounts	Debit	Credit
Dec.	Accounts Receivable	10,000	
	Service Revenue		10,000

By debiting Accounts Receivable we will increase total current assets. This, in turn, improves the current ratio.

Requirement 2
Recording this transaction in December violates the revenue recognition principle, which states that revenue should be recorded when it is earned. On December 31, the business has not performed the service for the client, and therefore has not earned the revenue. Recording the transaction in December is unethical because it deliberately misrepresents the facts.

Financial Statement Case 4-1
Requirement 1

Target Corporation uses the report format balance sheet.

Requirement 2

Target's largest current asset is Inventory, at $8,601 million.
Its largest current liability is Accounts Payable, at $7,418 million.

Financial Statement Case 4-1, cont.
Requirement 3

January 30, 2016
Current ratio = Total current assets / Total current liabilities
= $14,130 million / $12,622 million = 1.12

January 31, 2015
Current ratio = Total current assets / Total current liabilities
= $13,624 million / $11,736 million = 1.16

The ratio worsened slightly 2015 to 2016.

Requirement 4

Target reports furniture, fixtures, and equipment in the Property and equipment category.

Requirement 5

Accumulated Depreciation is $16,246 million. The book value of PP&E is $25,217 million. Therefore, Target's property, plant and equipment cost is $41,463 million at January 30, 2016 ($25,217 million + $16,246 million).

Team Project 4-1
Requirement 1

WINTZ LAWN SERVICE, INC.
Income Statement
Four Months Ended August 31, 2018

Revenues:		
Service Revenue ($5,500 + $750)		$ 6,250
Expenses:		
Wage Expense ($1,800 + $300)	$ 2,100	
Equipment Rent Expense ($600 x 4/6)	400	
Supplies Expense ($400 - $50)	350	
Repair Expense	300	
Depreciation Expense—Trailer	100	
Total Expenses		3,250
Net Income		$ 3,000

Team Project 4-1, cont.
Requirement 1

WINTZ LAWN SERVICE, INC. Statement of Retained Earnings Four Months Ended August 31, 2018	
Retained Earnings, May 1, 2018	$ 0
Net income for the year	3,000
	3,000
Dividends	(500)
Retained Earnings, August 31, 2018	$ 2,500

Team Project 4-1, cont.
Requirement 2

WINTZ LAWN SERVICE, INC. Balance Sheet August 31, 2018		
Assets		
Current Assets:		
Cash	$ 2,000	
Accounts Receivable	750	
Prepaid Equipment Rent	200	
Supplies	50	
Total Current Assets		$ 3,000
Property, Plant, and Equipment:		
Trailer	300	
Less: Accumulated Depreciation—Trailer	(100)	
Total Property, Plant, and Equipment		200
Total Assets		$ 3,200
Liabilities		
Current Liabilities:		
Wages Payable	$ 300	
Total Current Liabilities		$ 300
Stockholders' Equity		
Common Stock	400	
Retained Earnings	2,500	
Total Stockholders' Equity		2,900
Total Liabilities and Stockholders' Equity		$ 3,200

Requirement 3

Wintz's summer work was successful, as she earned a net income of $3,000.

Merchandising Operations 5

Will They Buy It?

Julie Ryski studied the model on the catwalk who was wearing the latest spring fashion. As a retail buyer for a nationwide high-end department store, Julie is responsible for selecting merchandise that will be sold in stores across America. Not only must Julie have a keen eye for the latest fashion designs and seasonal variations, but she must also understand the needs of the department store's customers. Julie enjoys attending fashion shows and other fashion-oriented promotions, but she knows that there is more to her responsibilities than simply selecting the newest spring outfits.

As Julie contemplates the model and whether she should purchase this merchandise for the department store's spring line, she knows that she has to always keep the department store's gross profit in mind. She is responsible for ensuring that the merchandise she buys will be purchased by customers and that it is priced effectively to ensure the highest profit maximization possible. In addition, she must ensure that this merchandise can meet the department store's sales goals and ultimate financial objectives. In the long run, Julie is responsible for all aspects of the merchandise that is sold in the store. She must understand how merchandise is reported on the financial statements, how it is recorded in the accounting records, and how the department store determines gross profit (the difference between the original cost and the retail price). Julie's buying decisions and expertise play a major role in the company's profits. Her pricing decisions ultimately affect the net income of the department store and are a major component of the department store's bottom line.

How Do Businesses Account for Merchandise Inventory?

In this chapter, we begin our exploration of companies that sell goods (called *merchandise inventory*) to customers. Although many of the accounting concepts you have learned concerning service businesses apply, merchandisers (businesses that sell inventory) have some unique characteristics you must learn to account for. For example, **Macy's, Inc.,** a nationally known premier retailer of the Macy's and Bloomingdale's brands with nearly 900 stores in 45 states, must have a way of accurately tracking the purchase and sale of its inventory. In addition, Macy's needs to determine if it is selling its merchandise at the right sales prices in order to ensure maximum profit. This chapter explores merchandising operations and how these businesses account for merchandise inventory.

Chapter 5 Learning Objectives

1. Describe merchandising operations and the two types of merchandise inventory systems
2. Account for the purchase of merchandise inventory using a perpetual inventory system
3. Account for the sale of merchandise inventory using a perpetual inventory system
4. Adjust and close the accounts of a merchandising business
5. Prepare a merchandiser's financial statements
6. Use the gross profit percentage to evaluate business performance
7. Account for multiple performance obligations using a perpetual inventory system (Appendix 5A)
8. Account for the purchase and sale of merchandise inventory using a periodic inventory system (Appendix 5B)

WHAT ARE MERCHANDISING OPERATIONS?

Learning Objective 1
Describe merchandising operations and the two types of merchandise inventory systems

In earlier chapters, you learned about accounting for Smart Touch Learning, an e-learning business that specializes in providing services: online courses in accounting, economics, marketing, and management. In this chapter, you learn about accounting for merchandisers. A **merchandiser** is a business that sells merchandise, or goods, to customers. The merchandise that this type of business sells is called **merchandise inventory.** Merchandisers are often identified as either wholesalers or retailers. A **wholesaler** is a merchandiser who buys goods from a manufacturer and then sells them to retailers. A **retailer** buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers.

Merchandiser
A business that sells merchandise, or goods, to customers.

Merchandise Inventory
The merchandise that a business sells to customers.

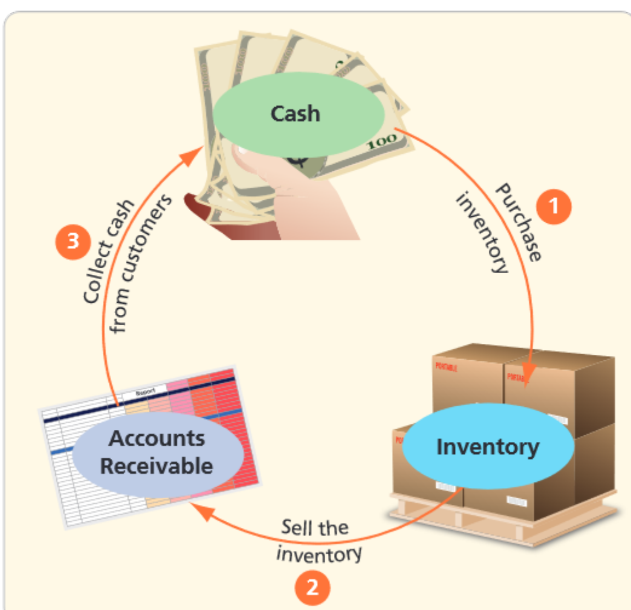
Wholesaler
A type of merchandiser who buys goods from manufacturers and then sells them to retailers.

Retailer
A type of merchandiser who buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers.

The Operating Cycle of a Merchandising Business

The operating cycle of a merchandiser is as follows (see Exhibit 5-1):

Exhibit 5-1 | Operating Cycle of a Merchandiser



1. It begins when the company purchases inventory from an individual or business, called a **vendor.**
2. The company then sells the inventory to a customer.
3. Finally, the company collects cash from customers.

Vendor
The individual or business from whom a company purchases goods.

Because the operating cycle of a merchandiser is different than that of a service company, the financial statements differ. Exhibit 5-2 shows how a service company's financial statements (on the left) differ from a merchandiser's financial statements (on the right). As you can see, merchandisers have some new balance sheet and income statement items.

On the income statement, a merchandising company reports revenues using an account called *Sales Revenue* rather than the account *Service Revenue* used by service companies. A merchandiser also reports the cost of merchandise inventory that has been sold to customers, or **Cost of Goods Sold (COGS).** Cost of Goods Sold is also called *Cost of Sales*. Because COGS is usually a merchandiser's main expense, an intermediary calculation,

Cost of Goods Sold (COGS)
The cost of the merchandise inventory that the business has sold to customers.

Exhibit 5-2 | **Financial Statements of a Service Company and a Merchandising Company**

SERVICE COMPANY
Income Statement
Year Ended December 31, 2018

Service Revenue		$ 230,000
Operating Expenses:		
Salaries Expense	$ 80,000	
Rent Expense	24,000	
Depreciation Expense—Furniture	9,000	
Utilities Expense	3,000	
Total Operating Expenses		116,000
Net Income		$ 114,000

Service Revenue − Operating Expenses = Net Income

MERCHANDISING COMPANY
Income Statement
Year Ended December 31, 2018

Sales Revenue		$ 230,000
Cost of Goods Sold		100,000
Gross Profit		130,000
Operating Expenses:		
Salaries Expense	$ 80,000	
Rent Expense	24,000	
Depreciation Expense—Furniture	9,000	
Utilities Expense	3,000	
Total Operating Expenses		116,000
Net Income		$ 14,000

Sales Revenue − Cost of Goods Sold = Gross Profit

A merchandising company reports revenue using Sales Revenue instead of Service Revenue.

Gross Profit − Operating Expenses = Net Income

SERVICE COMPANY
Balance Sheet (Partial)
December 31, 2018

Assets		
Current Assets:		
Cash	$ 34,000	
Accounts Receivable	10,800	
Office Supplies	800	
Prepaid Rent	2,100	
Total Current Assets		$ 47,700

MERCHANDISING COMPANY
Balance Sheet (Partial)
December 31, 2018

Assets		
Current Assets:		
Cash	$ 34,000	
Accounts Receivable	10,800	
Merchandise Inventory	60,000	
Office Supplies	800	
Prepaid Rent	2,100	
Total Current Assets		$ 107,700

Merchandise Inventory is included in a merchandising company's current assets.

Gross Profit
Excess of Net Sales Revenue over Cost of Goods Sold.

Operating Expenses
Expenses, other than Cost of Goods Sold, that are incurred in the entity's major ongoing operations.

gross profit, is determined before calculating net income. **Gross profit** (also called *gross margin*) is calculated as Net Sales Revenue minus Cost of Goods Sold and represents the markup on the merchandise inventory. Gross profit is the extra amount the company receives from the customer (for the merchandise sold) over what the company paid to the vendor. After calculating gross profit, operating expenses are then deducted to determine net income. **Operating expenses** are expenses, other than Cost of Goods Sold, that occur in the entity's major ongoing operations.

On the balance sheet, a merchandiser includes Merchandise Inventory in the current assets section representing the value of inventory that the business has on hand to sell to customers. Remember that the assets in the current asset section are listed in the order of liquidity; therefore, Merchandise Inventory is usually listed below Accounts Receivable but before the prepaid assets.

Merchandise Inventory Systems: Perpetual and Periodic Inventory Systems

Businesses must have a way to determine the value of merchandise inventory on hand and also the value of the merchandise inventory sold. There are two main types of inventory accounting systems that are used:

- Periodic inventory system
- Perpetual inventory system

Periodic Inventory System
An inventory system that requires businesses to obtain a physical count of inventory to determine quantities on hand.

The **periodic inventory system** requires businesses to obtain a physical count of inventory to determine the quantities on hand. The system is normally used for relatively inexpensive goods, such as in a small, local store without optical-scanning cash registers that does not keep a running record of every loaf of bread and every key chain that it sells. Restaurants and small retail stores often use the periodic inventory system. Appendix 5B covers the periodic inventory system, which is becoming less and less popular because most accounting is done using computerized methods.

Perpetual Inventory System
An inventory system that keeps a running computerized record of merchandise inventory.

The **perpetual inventory system** keeps a running computerized record of merchandise inventory—that is, the number of inventory units and the dollar amounts associated with the inventory are perpetually (constantly) updated. This system achieves better control over the inventory. A modern perpetual inventory system records the following:

- Units purchased and cost amounts.
- Units sold and sales and cost amounts.
- The quantity of merchandise inventory on hand and its cost.

In a perpetual inventory system, merchandise inventory and purchasing systems are integrated with the records for Accounts Receivable and Sales Revenue. For example, major department stores' computers use bar codes to keep up-to-the-minute records and show the current inventory at any time.

Are the bar codes I see on goods I purchase used to track inventory in the accounting system?

In a perpetual inventory system, the "cash register" at the store is a computer terminal that records sales and updates inventory records. **Bar codes are scanned by a laser. The bar coding is linked to merchandise inventory and cost data that are used to keep track of each unique inventory item.** However, note that even in a perpetual inventory system, the business must count inventory at least once a year. The physical count captures inventory transactions that are not recorded by the electronic system (such as misplaced, stolen, or damaged inventory). The count establishes the correct amount of ending inventory for the financial statements and also serves as a check on the perpetual records.

Try It!

Match the accounting terminology to the definitions.

1. Cost of Goods Sold
2. Perpetual inventory system
3. Vendor
4. Periodic inventory system
5. Operating expenses
6. Gross profit

a. An inventory system that requires businesses to obtain a physical count of inventory to determine quantities on hand.

b. Expenses, other than Cost of Goods Sold, that are incurred in the entity's major ongoing operations.

c. Excess of Net Sales Revenue over Cost of Goods Sold.

d. The cost of merchandise inventory that the business has sold to customers.

e. The individual or business from whom a company purchases goods.

f. An inventory system that keeps a running computerized record of merchandise inventory.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S5-1. MyAccountingLab

HOW ARE PURCHASES OF MERCHANDISE INVENTORY RECORDED IN A PERPETUAL INVENTORY SYSTEM?

Learning Objective 2
Account for the purchase of merchandise inventory using a perpetual inventory system

As noted previously, the cycle of a merchandising entity begins with the purchase of merchandise inventory. We will continue to use our fictitious company, Smart Touch Learning, which has now decided to discontinue its service business and instead plans to sell touch screen tablet computers that are preloaded with its e-learning software programs. Smart Touch Learning will purchase these tablets from a vendor. We assume Smart Touch Learning uses a perpetual inventory system.

The vendor (Southwest Electronics Direct) ships the tablet computers to Smart Touch Learning and sends an invoice the same day. The **invoice** is the seller's (Southwest Electronics Direct) request for payment from the buyer (Smart Touch Learning). An invoice is also called a *bill*. Exhibit 5-3 (on the next page) is the bill that Smart Touch Learning receives from Southwest Electronics Direct. After the merchandise inventory is received, Smart Touch Learning pays the vendor.

Invoice
A seller's request for payment from the purchaser.

For Southwest Electronics Direct, the seller, the invoice is called a sales invoice. For Smart Touch Learning, the purchaser, the invoice is called a purchase invoice.

Exhibit 5-3 | **Purchase Invoice**

1

Southwest Electronics Direct
P.O. BOX 101010
HOUSTON, TX 77212

3

Invoice	
Date	Number
6/1/19	410

2

6 *Pd. 6/15/19*

Shipped To: SMART TOUCH LEARNING
227 LAKE STREET
POMPTON PLAINS, IL 07444

4

Credit Terms
3/15, NET 30 DAYS

	Description		Quantity Shipped	Unit Price	Total
	Touch Screen Tablet Computers		100	$ 350	$35,000
			Sub Total		$35,000
			Ship. or Handl. Chg.		–
			Tax (3%)		–
			Total(s)		$35,000

Due Date & Due Amount			
06/16/19		07/01/2019	
$33,950		$35,000	

7 5

Explanations:

1 The seller is Southwest Electronics Direct.

2 The purchaser is Smart Touch Learning.

3 The invoice date is needed to determine whether the purchaser gets a discount for prompt payment (see 4).

4 Credit terms: If Smart Touch Learning pays within 15 days of the invoice date, it can deduct a 3% discount. Otherwise, the full amount—NET—is due in 30 days.

5 Total invoice amount is $35,000.

6 Smart Touch Learning's payment date. How much did Smart Touch Learning pay? (see 7).

7 Payment occurred 14 days after the invoice date—within the discount period—so Smart Touch Learning paid $33,950 ($35,000−3% discount).

Purchase of Merchandise Inventory

Here we use the actual invoice in Exhibit 5-3 to illustrate the purchasing process. Suppose Smart Touch Learning receives the goods on June 3, 2019, and makes payment on that date (ignore the credit terms on the invoice at this point). Smart Touch Learning records this purchase as follows:

A↑↓	=	L + E
Merchandise Inventory↑ Cash↓		

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	35,000	
	Cash		35,000
	Purchased inventory for cash.		

The Merchandise Inventory account, an asset, is used only for goods purchased that the business owns and intends to resell to customers. Office Supplies, Equipment, and other assets are recorded in their own accounts.

Assume that on June 3, instead of paying cash, Smart Touch Learning receives the merchandise inventory on account. The purchase of inventory on account is recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	35,000	
	Accounts Payable		35,000
	Purchased inventory on account.		

A↑	=	L↑	+	E
Merchandise Inventory↑		Accounts Payable↑		

Purchase Discounts

Many businesses offer purchasers a discount for early payment. This is called a **purchase discount** from the purchaser's perspective. Southwest Electronics Direct's **credit terms** of "3/15, NET 30 DAYS" mean that Smart Touch Learning can deduct 3% from the total bill (excluding freight charges, if any) if the company pays within 15 days of the invoice date. Otherwise, the full amount—NET—is due in 30 days. These credit terms can also be expressed as "3/15, n/30."

Terms of "n/30" mean that no discount is offered and payment is due 30 days after the invoice date. Most credit terms express the discount, the discount time period, and the final due date. Occasionally, the credit terms are expressed as EOM, which means payment is due at the end of the current month.

If Smart Touch Learning pays on June 15, 2019, which is within the discount period, the cash payment entry would be as follows:

Purchase Discount
A discount that businesses offer to purchasers as an incentive for early payment.

Credit Terms
The payment terms of purchase or sale as stated on the invoice.

Date	Accounts and Explanation	Debit	Credit
Jun. 15	Accounts Payable	35,000	
	Cash ($35,000 − $1,050)		33,950
	Merchandise Inventory ($35,000 × 0.03)		1,050
	Paid within discount period.		

A↓	=	L↓	+	E
Cash↓ Merchandise Inventory↓		Accounts Payable↓		

When making payment within a discount period, always debit Accounts Payable for the full amount of the invoice; otherwise there will be a balance remaining in the payable account even though the invoice has been paid in full.

The purchase discount is credited to the Merchandise Inventory account because the discount for early payment decreases the actual cost paid for Merchandise Inventory, as shown in the T-account:

Merchandise Inventory			
June 3	35,000	1,050	June 15
Bal.	33,950		

Accounts Payable			
June 15	35,000	35,000	June 3
Bal.	0		

Notice that the balance in the Merchandise Inventory account, $33,950, is exactly what was paid for the Merchandise Inventory on June 15, 2019. Also notice that the Accounts Payable account shows that the invoice was paid in full with no remaining balance.

What if Smart Touch Learning pays this invoice on June 24, 2019, after the discount period ends? Smart Touch Learning must pay the full $35,000.

What if a purchaser does not pay for the invoice within the discount period?

In that case, the payment entry is as follows:

A↓ (Cash↓) = L↓ (Accounts Payable↓) + E

Date	Accounts and Explanation	Debit	Credit
Jun. 24	Accounts Payable	35,000	
	Cash		35,000
	Paid after discount period.		

Purchase Returns and Allowances

Purchase Allowance
An amount granted to the purchaser as an incentive to keep goods that are not "as ordered."

Purchase Return
A situation in which sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable.

Sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable. This is called a **purchase return** from the purchaser's perspective. Alternatively, the seller may deduct an allowance from the amount the buyer owes. **Purchase allowances** are granted to the purchaser as an incentive to keep goods that are not "as ordered." Together, purchase returns and allowances decrease the buyer's cost of the merchandise inventory.

Assume that Smart Touch Learning has not yet paid the original bill of June 1. Suppose 20 of the tablets purchased on that invoice (Exhibit 5-3) were damaged in shipment. On June 4, Smart Touch Learning returns the goods (tablets, in this case) valued at $7,000 to the vendor (Southwest Electronics Direct) and records the purchase return as follows:

A↓ (Merchandise Inventory↓) = L↓ (Accounts Payable↓) + E

Date	Accounts and Explanation	Debit	Credit
Jun. 4	Accounts Payable	7,000	
	Merchandise Inventory (20 tablets × $350 per tablet)		7,000
	Returned inventory to seller (vendor).		

ETHICS

How should you handle gifts from vendors?

Anthony Jackson works as a buyer for a large department store that has decided to expand into selling seasonal home decor. Anthony has been charged with the responsibility of selecting the vendor for the new inventory that the store will sell. His purchasing manager has provided him with two possible vendors to choose from. One vendor, Abbey's Wholesalers, has a long-standing relationship with the department store and can be counted on to provide high-quality goods on a timely basis. The other vendor, Zeta Wholesalers, is a new company that doesn't have much of a track record and is just getting established as a home decor wholesaler. Anthony has contacted both vendors to set up meetings to discuss the new inventory and possible credit terms available. The day before the meeting with the potential vendors, Anthony receives a pair of football tickets to a major NFL game in the mail from Abbey's Wholesalers thanking him for his continued relationship with the wholesaler. What should Anthony do?

Solution

Anthony should contact his purchasing manager and explain the situation to him or her. By accepting the football tickets, Anthony might unknowingly be violating the code of ethics of the business. Most businesses have a code of ethics that relates to inventory management and purchasing specifically discussing conflicts of interest. Conflicts of interest occur when a vendor is selected above another vendor because of possible personal financial gain such as receiving gifts or entertainment from the selected vendor. Anthony should carefully discuss the situation with his manager before accepting the tickets.

The exact same entry is made for a purchase allowance granted to the buyer from the seller (vendor). The only difference between a purchase return and a purchase allowance is that, in the case of the allowance, Smart Touch Learning keeps the inventory.

Occasionally, a business will return merchandise inventory or receive an allowance before payment has been made. In this scenario, if the payment of the invoice is made within the discount period, the discount should be calculated net of the return or allowance. Let's look at another example. Suppose that on June 10, Smart Touch Learning purchased 15 tablets from Southwest Electronics Direct on account with credit terms of 3/15, n/30 at a cost of $5,250. Five days later, Smart Touch Learning returned five tablets to the vendor because of damages and received a purchase return of $1,750. When Smart Touch Learning makes payment on June 20 (within the discount period), it will calculate the discount on the amount due less the return or $3,500 ($5,250 − $1,750). Smart Touch Learning's discount will be $105 ($3,500 × 0.03). The entries that Smart Touch Learning would record for these transactions follow:

Date	Accounts and Explanation	Debit	Credit
Jun. 10	Merchandise Inventory	5,250	
	Accounts Payable		5,250
	Purchased inventory on account.		
15	Accounts Payable	1,750	
	Merchandise Inventory		1,750
	Returned inventory to the seller (vendor).		
20	Accounts Payable ($5,250 − $1,750)	3,500	
	Cash ($3,500 − $105)		3,395
	Merchandise Inventory ($3,500 × 0.03)		105
	Paid within discount period net of return.		

A↑	=	L↑	+	E
Merchandise Inventory↑		Accounts Payable↑		

A↓	=	L↓	+	E
Merchandise Inventory↓		Accounts Payable↓		

A↓	=	L↓	+	E
Cash↓ Merchandise Inventory↓		Accounts Payable↓		

TYING IT ALL TOGETHER

Macy's, Inc. was established in 1858 and sells an assortment of major brands such as Calvin Klein, Michael Kors, Ralph Lauren, and Tommy Hilfiger. Macy's purchases its inventory from third-party suppliers and for the year ending January 30, 2016, Macy's reported cost of sales of $16,496 million. Companies, such as Macy's, often have the opportunity to pay for their purchases within a discount period in order to receive a discount on the amount due.

How does a company decide if they should pay within the discount period?

Companies make decisions to pay within a discount period based on many factors. First, companies must evaluate if they have the excess cash flow to pay early or if the cash will be needed to pay other vendors. Second, the company should evaluate if the cash could be used for other more profitable purposes during the discount period. For example, some companies are able to invest the cash and earn more during the discount period than the available discount.

Should a company borrow money to make payment within the discount period?

Companies should borrow the money only if the amount of interest expense paid on the loan will be less than the discount received. It does not make sense for companies to borrow money to make an early payment if in the long run the company will end up paying more in interest expense than the discount received.

FOB Shipping Point
Situation in which the buyer takes ownership (title) to the goods after the goods leave the seller's place of business (shipping point) and the buyer typically pays the freight.

FOB Destination
Situation in which the buyer takes ownership (title) to the goods at the delivery destination point and the seller typically pays the freight.

Freight In
The transportation cost to ship goods into the purchaser's warehouse; therefore, it is freight on purchased goods.

Freight Out
The transportation cost to ship goods out of the seller's warehouse; therefore, it is freight on goods sold to a customer.

Transportation Costs

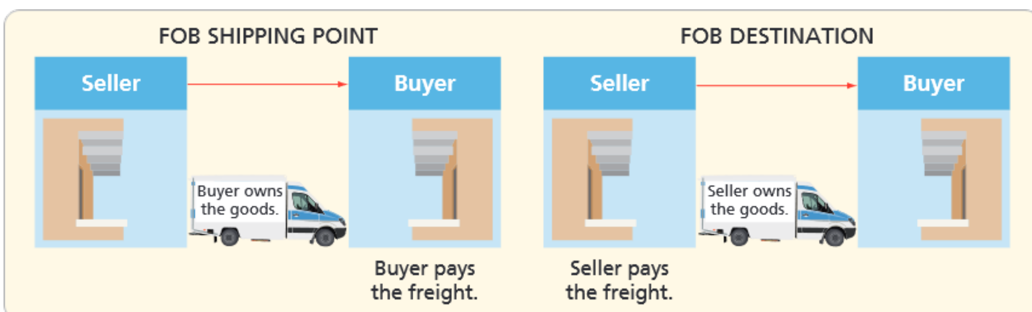
Either the seller or the buyer must pay the transportation cost of shipping merchandise inventory. The purchase agreement specifies FOB (free on board) terms to determine when title to the goods transfers to the purchaser and who pays the freight. Exhibit 5-4 shows that:

- **FOB shipping point** means the buyer takes ownership (title) to the goods after the goods leave the seller's place of business (shipping point). In most cases, the buyer (owner of the goods while in transit) also pays the freight.
- **FOB destination** means the buyer takes ownership (title) to the goods at the delivery destination point. In most cases, the seller (owner of the goods while in transit) also pays the freight.

When merchandisers are required to pay for shipping costs, those costs are classified as either freight in or freight out as follows:

- **Freight in** is the transportation cost to ship goods into the purchaser's warehouse; thus, it is freight on purchased goods.
- **Freight out** is the transportation cost to ship goods out of the seller's warehouse and to the customer; thus, it is freight on goods sold to a customer.

Exhibit 5-4 | **FOB Terms Determine Who Pays the Freight**



Freight In

With the terms FOB shipping point, the buyer owns the goods while they are in transit, so the buyer pays the freight. Because the freight is a cost that must be paid to acquire the inventory, freight in becomes part of the cost of merchandise inventory. As a result, freight in costs are debited to the Merchandise Inventory account. Suppose Smart Touch Learning pays a $60 freight charge on June 3 for a purchase with FOB shipping point, and makes the following entry:

A↑↓	=	L	+	E
Merchandise Inventory↑ Cash↓				

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	60	
	Cash		60
	Paid a freight bill.		

Freight In Within Discount Period

Discounts are computed only on the merchandise purchased from the seller. Discounts are not computed on the transportation costs because there is no discount on freight.

Under FOB shipping point, the seller sometimes prepays the transportation cost as a convenience and lists this cost on the invoice. Assume, for example, Smart Touch Learning makes a $5,000 purchase of goods, coupled with a related freight charge of $400, on June 20 on account with terms of 3/5, n/30. The terms of shipment are FOB shipping point. The seller prepays the freight charge. The purchase would be recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 20	Merchandise Inventory ($5,000 + $400)	5,400	
	Accounts Payable		5,400
	Purchased inventory on account, including freight.		

A↑	=	L↑	+	E
Merchandise Inventory↑		Accounts Payable↑		

If Smart Touch Learning pays within the discount period, the discount will be computed only on the $5,000 merchandise cost, not on the total invoice of $5,400. The $400 freight is not eligible for the discount. So, the 3% discount would be $150 ($5,000 × 0.03). The entry to record the early payment on June 25 follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 25	Accounts Payable	5,400	
	Cash ($5,400 − $150)		5,250
	Merchandise Inventory ($5,000 × 0.03)		150
	Paid within discount period, including freight.		

A↓	=	L↓	+	E
Cash↓ Merchandise Inventory↓		Accounts Payable↓		

Cost of Inventory Purchased

The net cost of merchandise inventory purchased includes the purchase cost of inventory, less purchase returns and allowances, less purchase discounts, plus freight in. Knowing the net cost of inventory allows a business to determine the actual cost of the merchandise purchased and is calculated as follows:

Net Cost of Inventory Purchased = Purchase cost of inventory − Purchase returns and allowances − Purchase discounts + Freight in

Suppose that during the year, Smart Touch Learning buys $281,750 of inventory, returns $61,250 of the goods, and takes a $4,410 early payment discount. The company also pays $14,700 of freight in. The following summary shows Smart Touch Learning's net cost of this merchandise inventory purchased.

Purchases	$ 281,750
Less: Purchase Returns and Allowances	61,250
Purchase Discounts	4,410
Plus: Freight In	14,700
Net Cost of Inventory Purchased	$ 230,790

Try It!

7. Click Computers has the following transactions in July related to the purchase of merchandise inventory.

July 1	Purchase of $20,500 worth of computers on account, terms of 2/10, n/30.
3	Return of $4,000 of the computers to the vendor.
9	Payment made on account.

Journalize the purchase transactions for Click Computers assuming the company uses the perpetual inventory system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S5-2 and S5-3. MyAccountingLab

HOW ARE SALES OF MERCHANDISE INVENTORY RECORDED IN A PERPETUAL INVENTORY SYSTEM?

Learning Objective 3
Account for the sale of merchandise inventory using a perpetual inventory system

After a company buys merchandise inventory, the next step is to sell the goods. We shift now to the selling side and follow Smart Touch Learning through a sequence of selling transactions using the perpetual inventory system.

Cash and Credit Card Sales

Sales of retailers, such as Smart Touch Learning, are often made for cash or credit card. Credit card sales are recorded as cash sales and the fees associated with credit card sales will be discussed in Chapter 7. Suppose Smart Touch Learning sold two tablets for cash on June 19, 2019, to a customer and issued the sales invoice in Exhibit 5-5. To the seller, a sales invoice is a bill showing what amount the customer must pay.

Exhibit 5-5 | Sales Invoice

Date: June 19, 2019 Invoice #582

STL SMART TOUCH LEARNING
227 LAKE STREET
POMPTON PLAINS, IL 07444

Quantity	Item	Unit Price	Total
2	Touch Screen Tablet Computers	$500	$1,000
Total			$1,000

The amount a business earns from selling merchandise inventory is called **Sales Revenue** (also called *Sales*). At the time of the sale, two entries must be recorded in the perpetual inventory system. One entry records the Sales Revenue and the Cash (or Accounts Receivable) at the time of the sale. The second entry records Cost of Goods Sold (debit the expense) and reduces the Merchandise Inventory (credit the asset). Remember, Cost of Goods Sold is an expense account and represents the cost of inventory that has been sold to customers.

Sales Revenue
The amount that a merchandiser earns from selling its inventory.

To record the sale by Smart Touch Learning, two journal entries must be recorded. The first journal entry records the cash sale of $1,000 by debiting Cash and crediting Sales Revenue. A second journal entry must also be made to record the expense and decrease the Merchandise Inventory balance. Suppose these goods sold by Smart Touch Learning cost $700. The second journal entry would transfer the $700 from the Merchandise Inventory account to the Cost of Goods Sold account, as follows:

This entry records the Sales Revenue.

This entry records the expense and the reduction of Merchandise Inventory.

Date	Accounts and Explanation	Debit	Credit
Jun. 19	Cash	1,000	
	Sales Revenue		1,000
	Cash sale.		
19	Cost of Goods Sold	700	
	Merchandise Inventory		700
	Recorded the cost of goods sold.		

A↑ Cash↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

The Cost of Goods Sold account keeps a current balance throughout the period in a perpetual inventory system of the cost of merchandise inventory sold. In this example, Cost of Goods Sold is $700 (the cost to Smart Touch Learning) rather than $1,000, the sales price (retail price) of the goods. Cost of Goods Sold is always based on the company's cost, not the retail price.

Merchandise Inventory

Bal.	xx,xxx	700	June 19

Cost of Goods Sold

June 19	700	

Sales on Account

Many sales are made on account (on credit) instead of with cash or a credit card. Now let's assume that Smart Touch Learning sold 5 tablets for $500 each, making a $2,500 (5 tablets × $500 per tablet) sale on account on June 15. The goods cost $1,750. Smart Touch Learning would record the sale on account as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 15	Accounts Receivable	2,500	
	Sales Revenue		2,500
	Sale on account.		
15	Cost of Goods Sold	1,750	
	Merchandise Inventory		1,750
	Recorded the cost of goods sold.		

A↑ Accounts Receivable↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

Sales Discounts

Sales Discounts
Reduction in the amount of revenue earned on sales for early payment.

Many sellers offer customers a discount for early payment. We saw that purchase discounts decrease the cost of inventory purchases. In the same way, **sales discounts** decrease the net amount of revenue earned on sales. Under the new revenue recognition standards (introduced in Chapter 3), sales are recorded at the net amount or the amount of the sale less any sales discounts.[1]

For example, assume on June 21, Smart Touch Learning sold 10 tablets for $500 each on account with terms of 2/10, n/30. The goods cost $3,500. In this case, Smart Touch Learning will record the sale at the net amount of $4,900—the $5,000 less the 2% discount, $100 ($5,000 × 0.02). The entries to record the sale and cost of goods sold follow:

A↑ = L + E↑
Accounts Receivable↑ = Sales Revenue↑

A↓ = L + E↓
Merchandise Inventory↓ = Cost of Goods Sold↑

Date	Accounts and Explanation	Debit	Credit
Jun. 21	Accounts Receivable	4,900	
	Sales Revenue ($5,000 − ($5,000 × 0.02))		4,900
	Sale on account less discount.		
21	Cost of Goods Sold	3,500	
	Merchandise Inventory		3,500
	Recorded the cost of goods sold.		

When the customer makes payment within the discount period, Smart Touch Learning will record the receipt of cash and decrease the Accounts Receivable for $4,900 as follows:

A↑↓ = L + E
Cash↑ Accounts Receivable↓

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Cash	4,900	
	Accounts Receivable		4,900
	Cash collection within the discount period.		

If for some reason the customer does not pay within the discount period, the customer will no longer receive the $100 discount and the customer must pay the full $5,000 amount. Smart Touch Learning would record the discount lost using the account Sales Discounts Forfeited. The account, Sales Discounts Forfeited, increases Other Income and Expenses on the income statement.

A↑↓ = L + E↑
Cash↑ Accounts Receivable↓ = Sales Discounts Forfeited↑

Date	Accounts and Explanation	Debit	Credit
Jul. 10	Cash	5,000	
	Accounts Receivable		4,900
	Sales Discounts Forfeited		100
	Cash collection outside the discount period.		

[1] This presentation is consistent with *Revenue from Contracts with Customers (Topic 606)*.

Notice that in either scenario, if the customer paid within the discount period or outside of the discount period, Smart Touch Learning credited the Accounts Receivable for the net amount of the invoice. As shown in the following T-account, by doing this, Smart Touch Learning has shown that the invoice was paid in full with no remaining balance.

Accounts Receivable			
June 21	4,900	4,900	Payment
Bal.	**0**		

Sales Returns and Allowances

After making a sale, Smart Touch Learning may have customers that return goods, asking for a refund or credit to the customer's account. Or the company may instead grant a sales allowance to encourage the customer to accept the nonstandard goods. Such an allowance reduces the future cash collected from the customer or requires a refund. The return of goods or granting of an allowance on sales is called **Sales Returns and Allowances.**

Sales Returns and Allowances
Customer's return of merchandise or an allowance granted to the customer.

Estimating Sales Returns

Under the new revenue recognition standard, companies should only record sales revenue in the amount they expect to eventually realize. Therefore, companies must decrease sales revenue by an estimated amount of sales returns. Using historical data, companies will estimate the amount of sales returns related to the sales for that period. For example, assume that Smart Touch Learning had sales of $1,000,000 for the period ending December 31, 2019. The cost of goods sold related to those sales was $600,000. Smart Touch Learning estimates that approximately 4% of the merchandise sold will be returned, or $40,000 ($1,000,000 × 4%) of sales revenue and $24,000 ($600,000 × 4%) of merchandise inventory. Smart Touch Learning will need to record two adjusting entries on December 31 to account for the estimated returns as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	40,000	
	Refunds Payable		40,000
	To record estimated refunds for the year.		
31	Estimated Returns Inventory	24,000	
	Cost of Goods Sold		24,000
	To record cost of estimated returns for the year.		

A	=	L↑	+	E↓
		Refunds Payable↑		Sales Revenue↓

A↑	=	L	+	E↑
Estimated Returns Inventory↑				Cost of Goods Sold↓

The first adjusting entry involves a debit to Sales Revenue that reduces sales for the year by the expected amount of the returns, thereby recording sales revenue at the net amount the company expects to eventually collect. The Refunds Payable account is a liability account and is reported on the balance sheet.

In the second adjusting entry, Smart Touch Learning debits an asset account, Estimated Returns Inventory, that represents the cost of the inventory the company believes it will receive in returns. The corresponding credit to Cost of Goods Sold decreases the expense.

Actual Return of Inventory

When a customer actually returns the inventory, the company will need to record the refund of cash to the customer (or credit of Accounts Receivable), and also the return of merchandise inventory. For example, assume that on January 20, 2020, a customer returned merchandise purchased with cash with a sales price of $2,000. The cost of the goods was $800. Smart Touch Learning refunded the cash to the customer and would record the following entries:

A↓ = L↓ + E
Cash↓ = Refunds Payable↓

A↑↓ = L + E
Merchandise Inventory↑ Estimated Returns Inventory↓

Date	Accounts and Explanation	Debit	Credit
Jan. 20	Refunds Payable	2,000	
	Cash		2,000
	To record refund.		
20	Merchandise Inventory	800	
	Estimated Returns Inventory		800
	To record cost of inventory returned.		

In recording the previous entries, Smart Touch Learning decreases the payable associated with the amount of estimated refunds. In addition, the Merchandise Inventory account has increased because the company received the returned inventory. To offset this, the Estimated Returns Inventory account decreases.

Sales Allowance

In situations of a sales allowance, a customer requests a refund of some portion owed but the customer does not return the inventory. When a seller grants a sales allowance, the company issues a credit memo indicating that the company will reduce the customer's Accounts Receivable or issue a cash refund. The company also reduces the estimated refunds payable. Because there is no return of goods, the company does not need to record a second entry to adjust the Merchandise Inventory account. Suppose that on January 28, 2020, Smart Touch Learning grants a $100 sales allowance for goods damaged in transit. The goods were sold on account and remain unpaid. A sales allowance is recorded as follows:

A↓ = L↓ + E
Accounts Receivable↓ = Refunds Payable↓

Date	Accounts and Explanation	Debit	Credit
Jan. 28	Refunds Payable	100	
	Accounts Receivable		100
	Granted a sales allowance for damaged goods.		

Transportation Costs—Freight Out

Remember that a freight out expense is one in which the seller pays freight charges to ship goods to customers. Freight out is a delivery expense to the seller. Delivery expense is an operating expense and is debited to the Delivery Expense account. For example, assume Smart Touch Learning paid $30 to ship goods to a customer on June 21, 2019. The entry to record that payment is as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 21	Delivery Expense	30	
	Cash		30
	Paid a freight bill.		

A↓	=	L	+	E↓
Cash↓				Delivery Expense↑

Try It!

8. Click Computers has the following transactions in July related to the sale of merchandise inventory.

July 12	Sold computers on account for $8,000 to a customer, terms 3/15, n/30. The cost of the computers is $4,800.
26	Received payment from the customer on balance due.

Journalize the sales transactions for Click Computers assuming the company uses the perpetual inventory system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S5-4 through S5-7. MyAccountingLab

WHAT ARE THE ADJUSTING AND CLOSING ENTRIES FOR A MERCHANDISER?

Learning Objective 4
Adjust and close the accounts of a merchandising business

A merchandiser adjusts and closes accounts the same way a service entity does. If a worksheet is used, the unadjusted trial balance is entered, and the worksheet is completed to determine net income or net loss. In addition to adjusting for estimated sales returns as illustrated earlier in the chapter, merchandisers must also adjust for inventory shrinkage.

Adjusting Merchandise Inventory Based on a Physical Count

The Merchandise Inventory account should stay current at all times in a perpetual inventory system. However, the actual amount of inventory on hand may differ from what the books show. This difference can occur because of theft, damage, and errors and is referred to as **inventory shrinkage.** For this reason, businesses take a physical count of inventory *at least* once a year. The most common time to count inventory is at the end of the fiscal year. The business then adjusts the Merchandise Inventory account based on the physical count. Smart Touch Learning must record an adjusting entry to account for this lost inventory.

Inventory Shrinkage
The loss of inventory that occurs because of theft, damage, and errors.

Smart Touch Learning's Merchandise Inventory account shows an unadjusted balance of $31,530. With no shrinkage—due to theft or error—the business should have inventory costing $31,530. But on December 31, Smart Touch Learning counts the inventory on hand, and the total cost comes to only $30,000.

Adjusting entry = Merchandise inventory balance before adjustment − Actual merchandise inventory on hand
= $31,530 − $30,000
= $1,530

Smart Touch Learning records this adjusting entry for inventory shrinkage:

A↓	=	L	+	E↓
Merchandise Inventory↓				Cost of Goods Sold↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold	1,530	
	Merchandise Inventory		1,530
	Adjustment for inventory shrinkage.		

This entry brings Merchandise Inventory to its correct balance and increases Cost of Goods Sold for the cost of the lost inventory.

Merchandise Inventory

Unadj. Bal.	31,530	1,530	Adj.	Dec. 31
Bal.	**30,000**			

Closing the Accounts of a Merchandiser

Exhibit 5-6 presents Smart Touch Learning's adjusted trial balance and closing entries for the year, which are similar to those you have already learned, except for the new accounts (highlighted in blue). Closing still means to zero out all temporary accounts (accounts that aren't on the balance sheet).

The four-step closing process for a merchandising company follows:

Step 1: Make the revenue accounts equal zero via the Income Summary account.

Step 2: Make expense accounts equal zero via the Income Summary account.

Step 3: Make the Income Summary account equal zero via the Retained Earnings account. This closing entry transfers net income (or net loss) to Retained Earnings.

Step 4: Make the Dividends account equal zero via the Retained Earnings account.

Exhibit 5-6 | **Adjusted Trial Balance and Closing Entries**

SMART TOUCH LEARNING
Adjusted Trial Balance
December 31, 2019

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 88,810	
Accounts Receivable	4,400	
Merchandise Inventory	30,000	
Estimated Returns Inventory	1,290	
Office Supplies	100	
Prepaid Rent	4,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		$ 1,750
Furniture	18,000	
Accumulated Depreciation—Furniture		2,100
Accounts Payable		10,000
Refunds Payable		800
Utilities Payable		2,500
Salaries Payable		1,500
Interest Payable		300
Unearned Revenue		900
Income Tax Payable		3,780
Notes Payable		60,000
Common Stock		48,000
Retained Earnings		3,550
Dividends	10,000	
Sales Revenue		920,000
Sales Discounts Forfeited		2,000
Cost of Goods Sold	540,000	
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense	7,800	
Supplies Expense	2,900	
Income Tax Expense	18,980	
Total	$ 1,057,180	$ 1,057,180

Temporary accounts that are closed.

Exhibit 5-6 (Continued)

A = L + E↑↓
Sales Revenue↓
Sales Discounts Forfeited↓
Income Summary↑

A = L + E↑↓
Income Summary↓
Expenses↓

A = L + E↑↓
Income Summary↓
Retained Earnings↑

A = L + E↑↓
Retained Earnings↓
Dividends↓

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	920,000	
	Sales Discounts Forfeited	2,000	
	Income Summary		922,000
	To close revenue.		
31	Income Summary	820,580	
	Cost of Goods Sold		540,000
	Salaries Expense		73,600
	Rent Expense		63,800
	Utilities Expense		55,500
	Insurance Expense		31,900
	Depreciation Expense—Building		1,500
	Depreciation Expense—Furniture		1,800
	Advertising Expense		11,800
	Interest Expense		11,000
	Delivery Expense		7,800
	Supplies Expense		2,900
	Income Tax Expense		18,980
	To close expenses.		
31	Income Summary	101,420	
	Retained Earnings		101,420
	To close Income Summary.		
31	Retained Earnings	10,000	
	Dividends		10,000
	To close Dividends.		

Income Summary

Clos. 2	820,580	922,000	Clos. 1
		101,420	Bal.
Clos. 3	101,420		
		0	**Bal.**

Retained Earnings

		3,550	Adj. Bal.
Clos. 4	10,000	101,420	Clos. 3
		94,970	**Bal.**

Dividends

Adj. Bal.	10,000		
		10,000	Clos. 4
Bal.	0		

Try It!

9. Click Computers's Merchandise Inventory account at year-end is showing a balance of $43,000. The physical count of inventory came up with $42,500. Journalize the adjusting entry needed to account for the inventory shrinkage. The company uses the perpetual inventory system.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S5-8 and S5-9. MyAccountingLab

HOW ARE A MERCHANDISER'S FINANCIAL STATEMENTS PREPARED?

Learning Objective 5
Prepare a merchandiser's financial statements

The financial statements that you have learned for a service business are also used by a merchandiser. However, the merchandiser's financial statements will contain the new accounts that have been introduced in this chapter. Let's take a look at some of the differences for a merchandising business.

Income Statement

In previous chapters, you learned how to prepare the income statement using what we now call the single-step format. In this chapter, we will introduce a new format: the multi-step format.

Single-Step Income Statement

The **single-step income statement** groups all revenues together and all expenses together without calculating other subtotals. Many companies use this format. The single-step format clearly distinguishes revenues from expenses and works well for service entities because they have no gross profit to report. Exhibit 5-7 shows a single-step income statement for Smart Touch Learning.

Single-Step Income Statement
Income statement format that groups all revenues together and then lists and deducts all expenses together without calculating any subtotals.

Exhibit 5-7 | **Single-Step Income Statement**

Sales Revenue is recorded net of sales discounts, so it is labeled Net Sales Revenue on the income statement.

SMART TOUCH LEARNING Income Statement Year Ended December 31, 2019		
Revenues:		
Net Sales Revenue		$ 920,000
Sales Discounts Forfeited		2,000
Total Revenues		922,000
Expenses:		
Cost of Goods Sold	$ 540,000	
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense	7,800	
Supplies Expense	2,900	
Income Tax Expense	18,980	
Total Expenses		820,580
Net Income		$ 101,420

IFRS

Cost of Goods Sold represents a *functional* expense. Such expenses explain the purpose of the cost incurred. IFRS allows companies to present expenses according to their function or nature. For example, expenses are described as salaries, utilities, or advertising expenses.

Multi-Step Income Statement

Multi-Step Income Statement
Income statement format that contains subtotals to highlight significant relationships. In addition to net income, it reports gross profit and operating income.

A **multi-step income statement** is different than a single-step income statement because it lists several important subtotals. In addition to net income (the bottom line), it also reports subtotals for gross profit, operating income (also called *income from operations*), and income before income tax expense. The multi-step income statement for Smart Touch Learning appears in Exhibit 5-8.

The income statement begins by calculating gross profit. Gross profit is the markup on the merchandise inventory and is calculated as net sales revenue minus cost of goods sold. Net sales revenue is sales revenue less discounts, and estimated returns and allowances. Gross profit, along with net income, is a measure of a business's success. A sufficiently high gross profit is vital to a merchandiser. Next, the operating expenses, those expenses other than cost of goods sold, are listed.

Exhibit 5-8 | Multi-Step Income Statement

SMART TOUCH LEARNING
Income Statement
Year Ended December 31, 2019

	Net Sales Revenue		$ 920,000
Gross Profit	Cost of Goods Sold		540,000
	Gross Profit		380,000
	Operating Expenses:		
	Selling Expenses:		
	Salaries Expense	$ 44,160	
	Rent Expense	38,280	
	Advertising Expense	11,800	
	Depreciation Expense—Building	1,500	
	Delivery Expense	7,800	
	Total Selling Expenses	103,540	
Operating Income	Administrative Expenses:		
	Utilities Expense	55,500	
	Salaries Expense	29,440	
	Insurance Expense	31,900	
	Rent Expense	25,520	
	Depreciation Expense—Furniture	1,800	
	Supplies Expense	2,900	
	Total Administrative Expenses	147,060	
	Total Operating Expenses		250,600
	Operating Income		129,400
	Other Income and (Expenses):		
	Sales Discounts Forfeited	2,000	
Other Income and (Expenses) and Income Before Income Tax Expense	Interest Expense	(11,000)	
	Total Other Income and (Expenses)		(9,000)
	Income Before Income Tax Expense		120,400
Income Tax Expense and Net Income	Income Tax Expense		18,980
	Net Income		$ 101,420

Both merchandisers and service companies report operating expenses in two categories:

- **Selling expenses** are expenses related to marketing and selling the company's goods and services. These include sales salaries, sales commissions, advertising, depreciation on store buildings and equipment, store rent, utilities on store buildings, property taxes on store buildings, and delivery expense.
- **Administrative expenses** include expenses *not* related to marketing the company's goods and services. These include office expenses, such as the salaries of the executives and office employees; depreciation on office buildings and equipment; rent other than on stores (for example, rent on the administrative office); utilities other than on stores (for example, utilities on the administrative office); and property taxes on the administrative office building.

Selling Expenses
Expenses related to marketing and selling the company's goods and services.

Administrative Expenses
Expenses incurred that are not related to marketing the company's goods and services.

Gross profit minus operating expenses equals **operating income** (also called *income from operations*). Operating income measures the results of the entity's major ongoing activities (normal operations).

Operating Income
Measures the results of the entity's major ongoing activities. Gross profit minus operating expenses.

The next section of the income statement is **other income and expenses.** This category reports revenues and expenses that fall outside the business's main, day-to-day, regular operations. Examples include interest revenue, sales discounts forfeited, interest expense, and gains and losses on the sale of plant assets. These examples have nothing to do with the business's "normal" operations. As a result, they are classified as "other" items.

Other Income and Expenses
Revenues or expenses that are outside the normal, day-to-day operations of a business, such as a gain or loss on the sale of plant assets or interest expense.

Lastly, corporations are required to pay income tax. Therefore, the last section of the income statement is the **income tax expense** section. This section reports the federal and state income taxes that are incurred by the corporation. The calculation of income tax expense is complicated and will be covered in later accounting courses and is only presented here for informational purposes.

Income Tax Expense
Expense incurred by a corporation related to federal and state income taxes.

Statement of Retained Earnings and the Balance Sheet

A merchandiser's statement of retained earnings looks exactly like that of a service business. The balance sheet will also look the same as for a service business, except merchandisers have additional current asset accounts, Merchandise Inventory and Estimated Returns Inventory. In addition, merchandisers will have an additional current liability account, Refunds Payable, to represent the estimated amount of refunds that are due.

Try It!

10. Capital City Motorcycle's selected accounts as of December 31, 2018, follow:

Selling Expenses	$ 10,500
Interest Revenue	1,000
Net Sales Revenue	113,500
Cost of Goods Sold	85,000
Administrative Expenses	8,000

Prepare the multi-step income statement for the year ended December 31, 2018.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S5-10 and S5-11. MyAccountingLab

HOW DO WE USE THE GROSS PROFIT PERCENTAGE TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6
Use the gross profit percentage to evaluate business performance

Gross Profit Percentage
Measures the profitability of each sales dollar above the cost of goods sold. Gross profit / Net sales revenue.

Merchandisers use several ratios to evaluate their operations, and among them is the gross profit percentage. The **gross profit percentage** measures the profitability of each sales dollar above the cost of goods sold and is computed as follows:

Gross profit percentage = Gross profit / Net sales revenue

The gross profit percentage is one of the most carefully watched measures of profitability. It reflects a business's ability to earn a profit on its merchandise inventory. The gross profit earned on merchandise inventory must be high enough to cover the remaining operating expenses and to earn net income. A small increase in the gross profit percentage from last year to this year may signal an important rise in income. Conversely, a small decrease from last year to this year may signal trouble. Gross profit percentages vary among industries, but in general, a high gross profit percentage is desired.

Returning to **Kohl's Corporation** we can now calculate the gross profit percentage. Kohl's Corporation had the following net sales and cost of merchandise sold (cost of goods sold), found on the income statement for the fiscal year ending January 30, 2016. Visit http://www.pearsonhighered.com/Horngren to view a link to Kohl's Corporation's annual report.

	For year ended Jan. 30, 2016 (in millions)	For year ended Jan. 31, 2015 (in millions)
Net sales	$ 19,204	$ 19,023
Cost of merchandise sold	12,265	12,098

Gross profit is calculated as net sales less cost of merchandise sold. To determine the gross profit percentage, the gross profit is then divided by net sales. The gross profit percentage for the year ending January 30, 2016, follows (amounts in millions):

Gross profit percentage = ($19,204 − $12,265) / $19,204 = 0.361 = 36.1%

In comparison, the gross profit percentage for the year ending January 31, 2015, was:

Gross profit percentage = ($19,023 − $12,098) / $19,023 = 0.364 = 36.4%

The gross profit percentage decreased slightly from fiscal year 2014 to 2015, signifying that the percentage of gross profit on sales is decreasing. However, when compared with the industry average for gross profit percentage, 35%, Kohl's is slightly higher than average. Kohl's should monitor the amount of profit it is earning on its merchandise inventory and take action if the percentage continues to drop.

Try It!

11. Capital City Motorcycle's selected accounts as of December 31, 2018, follow:

Selling Expenses	$ 10,500
Interest Revenue	1,000
Net Sales Revenue	113,500
Cost of Goods Sold	85,000
Administrative Expenses	8,000

Determine the gross profit percentage for the year ended December 31, 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S5-12. MyAccountingLab

APPENDIX 5A: Accounting for Multiple Performance Obligations

HOW ARE MULTIPLE PERFORMANCE OBLIGATIONS RECORDED IN A PERPETUAL INVENTORY SYSTEM?

Learning Objective 7
Account for multiple performance obligations using a perpetual inventory system

Under the new revenue recognition standards, companies are required to identify the performance obligations associated with each contract. Remember, a performance obligation is a contractual promise with a customer to transfer a distinct good or service. Some contracts with customers might have multiple performance obligations. For example, assume that Smart Touch Learning often provides its customers with a two-year service contract when it sells its tablets. In this case, there are two distinct performance obligations: the two-year service contract and the tablet.

When contracts involve multiple performance obligations, the company is required to allocate the transaction price to each performance obligation separately. For example, assume on November 1 Smart Touch Learning sells one tablet (cost of $350) along with a two-year service contract to a customer for $620. The customer pays cash at the time of the sale. The $620 sales price must be allocated among each performance obligation. Smart Touch Learning allocates the sales price of $620 as follows: $500 for the tablet and $120 for the two-year service contract.

In recording the transaction, Smart Touch Learning should only recognize revenue when, or as, it satisfies each performance obligation. The $500 associated with tablet would be recognized as Sales Revenue because the tablet has been delivered to the customer. The $120 for the two-year service contract would be recorded as Unearned Revenue because the company has not satisfied the obligation of servicing or fulfilling the service contract.

Smart Touch Learning would record the transaction on November 1 as follows:

A↑	=	L↑	+	E↑
Cash↑		Unearned Revenue↑		Sales Revenue↑

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash	620	
	Sales Revenue		500
	Unearned Revenue		120
	Cash sale including two-year service contract.		
Nov. 1	Cost of Goods Sold	350	
	Merchandise Inventory		350
	Recorded the cost of goods sold.		

A↓	=	L	+	E↓
Merchandise Inventory↓				Cost of Goods Sold↑

As Smart Touch Learning satisfies the service contract, the company would recognize the revenue. For example, at December 31, Smart Touch Learning has provided two months of service for the tablet. Smart Touch Learning would record $10 of Service Revenue ($120 / 24 months × 2 months).

A	=	L↓	+	E↑
		Unearned Revenue↓		Service Revenue↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	10	
	Service Revenue		10
	Service revenue earned.		

APPENDIX 5A

Try It!

12A. Click Computers has the following transactions related to the sale of merchandise inventory.

Mar. 1	Sold a computer (cost of $3,000) for $8,000 to a customer. The customer paid cash. The sales price included a one-year service contract valued at $168.
Dec. 31	Recorded the amount of service contract earned.

Journalize the transactions for Click Computers assuming that the company uses the perpetual inventory system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S5A-13. MyAccountingLab

APPENDIX 5B: Accounting for Merchandise Inventory in a Periodic Inventory System

HOW ARE MERCHANDISE INVENTORY TRANSACTIONS RECORDED IN A PERIODIC INVENTORY SYSTEM?

Learning Objective 8
Account for the purchase and sale of merchandise inventory using a periodic inventory system

Some smaller businesses find it too expensive to invest in a perpetual inventory system. These businesses use a periodic inventory system. In a periodic inventory system, businesses must obtain a physical count of inventory to determine quantities on hand.

Purchases of Merchandise Inventory

All inventory systems use the Merchandise Inventory account. But in a periodic inventory system, purchases, purchase discounts, purchase returns and allowances, and freight in costs are recorded in separate accounts during the year and then the Merchandise Inventory account is updated in the closing process. Let's account for Smart Touch Learning's purchase of the tablet computers from Southwest Electronics Direct as shown in Exhibit 5-3.

The following entries record the receipt of goods on account on June 3 and payment on June 15 (within the discount period) using the periodic inventory system.

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Purchases	35,000	
	Accounts Payable		35,000
	Purchased inventory on account.		
15	Accounts Payable	35,000	
	Cash ($35,000 − $1,050)		33,950
	Purchase Discounts ($35,000 × 0.03)		1,050
	Paid within discount period.		

A = { L↑ + E↓ }
Accounts Payable↑ | Purchases↑

A↓ = { L↓ + E↑ }
Cash↓ = Accounts Payable↓ | Purchase Discounts↑

When using the periodic inventory system, the Merchandise Inventory account is not updated during the period. Therefore, it will never be used when recording purchases, discounts, returns, or sales of inventory.

Notice that the purchase of merchandise inventory is not recorded directly into the Merchandise Inventory account. Instead, it is recorded in a separate account called *Purchases* (an expense account). Likewise, when Smart Touch Learning makes payment for the merchandise, the purchase discount is recorded in a separate account called *Purchase Discounts* (a contra expense account).

Recording Purchase Returns and Allowances

Suppose that, prior to payment, on June 4, Smart Touch Learning returned 20 tablets to the vendor costing $7,000. The company would record this return as follows:

A	=	L↓	+	E↑
		Accounts Payable↓		Purchase Returns and Allowances↑

Date	Accounts and Explanation	Debit	Credit
Jun. 4	Accounts Payable	7,000	
	Purchase Returns and Allowances		7,000
	Returned inventory to seller (vendor).		

In the periodic inventory system, instead of recording the return to Merchandise Inventory, a separate account, Purchase Returns and Allowances, is used. Both Purchase Discounts and Purchase Returns and Allowances are contra expense accounts. They are contra accounts to the Purchases account.

During the period, the business records the cost of all inventory bought in the Purchases account. The balance of Purchases is a *gross* amount because it does not include subtractions for discounts, returns, or allowances. **Net purchases** is the remainder after subtracting the contra accounts from Purchases:

Net Purchases
Purchases less purchase returns and allowances less purchase discounts.

	Purchases
−	Purchase Returns and Allowances
−	Purchase Discounts
=	Net Purchases

APPENDIX 5B

Recording Transportation Costs

Under the periodic inventory system, freight in is debited to a separate Freight In account (an adjunct expense account) as opposed to debiting the Merchandise Inventory account. For example, suppose Smart Touch Learning pays a $60 freight charge on June 3. The company would make the following entry:

A↓	=	L	+	E↓
Cash↓				Freight In↑

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Freight In	60	
	Cash		60
	Paid a freight bill.		

Sale of Merchandise Inventory

Recording sales of merchandise inventory is streamlined in the periodic inventory system. With no running record of merchandise inventory to maintain, there is no need to record an entry to Merchandise Inventory and Cost of Goods Sold. Instead, a sale of inventory involves recording only the Sales Revenue portion. Suppose that on June 21, Smart Touch

Learning sold 10 tablets for a total sale of $5,000 on account with terms of 2/10, n/30. The company would record the sale as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 21	Accounts Receivable	4,900	
	Sales Revenue ($5,000 − ($5,000 × 0.02))		4,900
	Sale on account less discount.		

A↑	=	L	+	E↑
Accounts Receivable↑				Sales Revenue↑

Accounting for sales discounts and sales returns and allowances is the same as in a perpetual inventory system, except that there are no entries for merchandise inventory.

Preparing Financial Statements

The financial statements under the perpetual and periodic inventory systems are similar. However, the periodic inventory system requires an additional calculation—the cost of goods sold. As we have seen under the perpetual inventory system, cost of goods sold is simply the sum of the amounts posted to that account. Cost of goods sold must be computed separately under the periodic inventory system. At the end of each period, the company combines a number of accounts to compute cost of goods sold for the period, and this calculation is shown on the income statement. Cost of goods sold is calculated as follows for Smart Touch Learning:

Beginning Merchandise Inventory		$ 0
Purchases	$ 695,000	
Less: Purchase Returns and Allowances	150,600	
Purchase Discounts	9,510	
Net Purchases	534,890	
Plus: Freight In	36,400	
Net Cost of Purchases		571,290
Cost of Goods Available for Sale		571,290
Less: Ending Inventory*		31,290
Cost of Goods Sold		$ 540,000

* (Includes $1,290 of Estimated Returns Inventory)

Adjusting and Closing Entries

When using the periodic inventory system, there is no need to record an adjusting entry for inventory shrinkage. This is because there is no perpetual running balance of the Merchandise Inventory account. Instead, the business determines the ending Merchandise Inventory amount by taking a physical count of inventory. The amount of the physical count is $30,000 and is recorded as ending Merchandise Inventory. The Estimated Returns Inventory is also recorded for an amount of $1,290.

The process of recording the ending Merchandise Inventory is completed through the closing entry process. Let's take a look at Smart Touch Learning's adjusted trial balance and closing entries for the year under the periodic inventory system shown in Exhibit 5B-1 (on the next page). The accounts that are used in the periodic inventory system are highlighted in blue.

Exhibit 5B-1 | **Adjusted Trial Balance and Closing Entries**

SMART TOUCH LEARNING
Adjusted Trial Balance
December 31, 2019

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 88,810	
Accounts Receivable	4,400	
Merchandise Inventory (beginning)	0	
Office Supplies	100	
Prepaid Rent	4,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		$ 1,750
Furniture	18,000	
Accumulated Depreciation—Furniture		2,100
Accounts Payable		10,000
Refunds Payable		800
Utilities Payable		2,500
Salaries Payable		1,500
Interest Payable		300
Unearned Revenue		900
Income Tax Payable		3,780
Notes Payable		60,000
Common Stock		48,000
Retained Earnings		3,550
Dividends	10,000	
Sales Revenue		920,000
Sales Discounts Forfeited		2,000
Purchases	695,000	
Purchase Returns and Allowances		150,600
Purchase Discounts		9,510
Freight In	36,400	
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense	7,800	
Supplies Expense	2,900	
Income Tax Expense	18,980	
Total	$ 1,217,290	$ 1,217,290

Temporary accounts that are closed.

APPENDIX 5B

Exhibit 5B-1 | (Continued)

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	920,000	
	Sales Discounts Forfeited	2,000	
	Purchase Returns and Allowances	150,600	
	Purchase Discounts	9,510	
	Merchandise Inventory (ending)	30,000	
	Estimated Returns Inventory	1,290	
	Income Summary		1,113,400
	To close revenue and other credit accounts and record ending merchandise inventory.		
31	Income Summary	1,011,980	
	Purchases		695,000
	Freight In		36,400
	Merchandise Inventory (beginning)		0
	Salaries Expense		73,600
	Rent Expense		63,800
	Utilities Expense		55,500
	Insurance Expense		31,900
	Depreciation Expense—Building		1,500
	Depreciation Expense—Furniture		1,800
	Advertising Expense		11,800
	Interest Expense		11,000
	Delivery Expense		7,800
	Supplies Expense		2,900
	Income Tax Expense		18,980
	To close expenses and other debit accounts and remove beginning merchandise inventory.		
31	Income Summary	101,420	
	Retained Earnings		101,420
	To close Income Summary.		
31	Retained Earnings	10,000	
	Dividends		10,000
	To close Dividends.		

A↑	=	L	+	E↑
Merchandise Inventory↑ Estimated Returns Inventory↑				Sales Revenue↓ Sales Discounts Forfeited↓ Purchase Returns and Allowances↓ Purchase Discounts↓ Income Summary↑

A↓	=	L	+	E↓
Merchandise Inventory↓				Income Summary↓ Expenses↓

A	=	L	+	E↑↓
				Income Summary↓ Retained Earnings↑

A	=	L	+	E↑↓
				Retained Earnings↓ Dividends↓

Income Summary

Clos. 2	1,011,980	1,113,400	Clos. 1
		101,420	Bal.
Clos. 3	101,420		
		0	**Bal.**

Retained Earnings

		3,550	Adj. Bal.
Clos. 4	10,000	101,420	Clos. 3
		94,970	**Bal.**

Dividends

Adj. Bal.	10,000		
		10,000	Clos. 4
Bal.	0		

APPENDIX 5B

The four-step closing process under the periodic inventory system is similar to the perpetual inventory system, but let's take a moment to highlight the differences:

Step 1: Using the periodic inventory system, Sales Revenue and Sales Discounts Forfeited are still closed with a debit via the Income Summary account, but in addition, all other temporary accounts with credit balances (Purchase Returns and Allowances and Purchase Discounts) are also closed. The ending Merchandise Inventory (determined from the physical count) and Estimated Returns Inventory are recorded as debits.

Step 2: Expense accounts and other temporary accounts with debit balances are still closed via the Income Summary account. In addition, the beginning Merchandise Inventory, Purchases, and Freight In are also closed via the Income Summary account. Notice in the Merchandise Inventory T-account shown below that the ending inventory is recorded with a debit entry and the beginning inventory is removed with a credit entry during the closing process.

Merchandise Inventory

Adj. Bal.	0		
Clos. 1	30,000	0	Clos. 2
Bal.	**30,000**		

The key difference in the closing process under the periodic inventory system is how merchandise inventory is handled. In the periodic inventory system, the ending merchandise inventory balance must be recorded as a debit during closing and the beginning merchandise inventory balance must be recorded as a credit during closing. The additional Purchases and related contra and adjunct accounts must also be closed.

Step 3 and **Step 4:** These steps, closing the Income Summary and Dividends accounts, are the same under both methods.

APPENDIX 5B

Try It!

13B. Click Computers has the following transactions in July related to purchase and sale of merchandise inventory.

July 1	Purchase of $20,500 worth of computers on account, terms of 2/10, n/30.
3	Return of $4,000 of the computers to the vendor.
9	Payment made on account.
12	Sold computers on account for $8,000 to a customer, terms 3/15, n/30.
26	Received payment from customer on balance due.

Journalize the transactions for Click Computers assuming that the company uses the periodic inventory system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S5B-14 through S5B-17. MyAccountingLab

REVIEW

> Things You Should Know

1. What are merchandising operations?

- A merchandiser is a business that sells merchandise, or goods, to customers.
- There are two main types of inventory accounting systems that are used by merchandisers:
  - Periodic inventory system—requires businesses to obtain a physical count of inventory to determine quantities on hand
  - Perpetual inventory system—keeps a running computerized record of merchandise inventory

2. How are purchases of merchandise inventory recorded in a perpetual inventory system?

- Purchase of merchandise inventory

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	XXX	
	Cash or Accounts Payable		XXX

- Purchase return

Date	Accounts and Explanation	Debit	Credit
	Cash or Accounts Payable	XXX	
	Merchandise Inventory		XXX

- Payment of freight in

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	XXX	
	Cash		XXX

- Payment of merchandise inventory within discount period

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	XXX	
	Cash		XXX
	Merchandise Inventory		XXX

- Payment of merchandise inventory after discount period

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	XXX	
	Cash		XXX

CHAPTER 5

3. How are sales of merchandise inventory recorded in a perpetual inventory system?

- Sales of merchandise inventory are recorded at the net amount (sales price less any discount)

Date	Accounts and Explanation	Debit	Credit
	Cash or Accounts Receivable	XXX	
	Sales Revenue		XXX
	Cost of Goods Sold	XXX	
	Merchandise Inventory		XXX

- Companies must estimate the amount of merchandise inventory that will be returned

Date	Accounts and Explanation	Debit	Credit
	Sales Revenue	XXX	
	Refunds Payable		XXX
	Estimated Returns Inventory	XXX	
	Cost of Goods Sold		XXX

- Return of merchandise inventory by customer

Date	Accounts and Explanation	Debit	Credit
	Refunds Payable	XXX	
	Cash or Accounts Receivable		XXX
	Merchandise Inventory	XXX	
	Estimated Returns Inventory		XXX

- Sales allowance

Date	Accounts and Explanation	Debit	Credit
	Refunds Payable	XXX	
	Cash or Accounts Receivable		XXX

- Payment of freight out

Date	Accounts and Explanation	Debit	Credit
	Delivery Expense	XXX	
	Cash		XXX

- Collection of cash during discount period

Date	Accounts and Explanation	Debit	Credit
	Cash	XXX	
	Accounts Receivable		XXX

- Collection of cash after discount period

Date	Accounts and Explanation	Debit	Credit
	Cash	XXX	
	Accounts Receivable		XXX
	Sales Discounts Forfeited		XXX

4. What are the adjusting and closing entries for a merchandiser?

- An adjusting entry must be made for inventory shrinkage, the loss of inventory that occurs because of theft, damage, and errors.
- The closing entries are similar to those already learned, except for including the new accounts (Sales Revenue, Sales Discounts Forfeited, Delivery Expense, and Cost of Goods Sold).

5. How are a merchandiser's financial statements prepared?

- There are two formats for the income statement:
  - Single-step income statement—groups all revenues together and all expenses together without calculating other subtotals
  - Multi-step income statement—lists several important subtotals including gross profit, operating income, and income before income tax expense
- A merchandiser's statement of retained earnings looks exactly like that of a service business.
- The balance sheet will also look the same, except merchandisers have additional current asset accounts, such as Merchandise Inventory and Estimated Returns Inventory. In addition, a merchandiser's balance sheet also includes the current liability Refunds Payable.

6. How do we use the gross profit percentage to evaluate business performance?

- The gross profit percentage measures the profitability of each sales dollar above the cost of goods sold.
- Gross profit percentage = Gross profit / Net sales revenue.

7. How are multiple performance obligations recorded in a perpetual inventory system? (Appendix 5A)

- The sales price of contracts involving multiple performance obligations must be allocated among each distinct performance obligation.
- Revenue is recognized when, or as, the company satisfies each performance obligation.

8. How are merchandise inventory transactions recorded in a periodic inventory system? (Appendix 5B)

- The Merchandise Inventory account is not used when recording purchase transactions. Instead Purchases, Purchase Discounts, Purchase Returns and Allowances, and Freight In are used.
- Sales transactions only involve recording the Sales Revenue. The Merchandise Inventory account is not used.
- An adjustment for inventory shrinkage is not needed.
- Closing entries are similar to the perpetual inventory system with the addition of closing the new accounts discussed. Ending Merchandise Inventory must be recorded, and beginning Merchandise Inventory must be removed.

> Check Your Understanding 5-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Suppose Heat Miser Air Conditioner Company engaged in the following transactions during June of the current year:

Jun. 3	Purchased inventory on account with credit terms of 1/10, n/EOM, $1,600.
9	Returned 40% of the inventory purchased on June 3. It was defective.
12	Sold goods for cash, $920 (cost, $550).
15	Purchased goods for $5,000 on account. Credit terms were 3/15, n/30.
16	Paid a $260 freight bill on goods purchased.
17	Sold inventory for $4,000 cash (cost, $2,360).
18	Sold inventory for $2,000 on account with credit terms of 2/10, n/30 (cost, $1,180).
22	Received returned goods from the customer of the June 17 sale, $800 (cost, $480).
24	Paid supplier for goods purchased on June 15.
28	Received cash in full settlement of the account from the customer who purchased inventory on June 18.
29	Paid the amount owed on account from the purchase of June 3.
30	The company estimated that $400 of merchandise sold will be returned with a cost of $240.

Requirement

Journalize the preceding transactions. Assume Heat Miser uses a perpetual inventory system. The company estimates sales returns at the end of each month. (See Learning Objectives 2 and 3.)

CHAPTER 5

> Solution

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	1,600	
	Accounts Payable		1,600
	Purchased inventory on account.		
9	Accounts Payable ($1,600 × 0.40)	640	
	Merchandise Inventory		640
	Returned inventory to seller (vendor).		
12	Cash	920	
	Sales Revenue		920
	Cash sale.		
12	Cost of Goods Sold	550	
	Merchandise Inventory		550
	Recorded the cost of goods sold.		
15	Merchandise Inventory	5,000	
	Accounts Payable		5,000
	Purchased inventory on account.		
16	Merchandise Inventory	260	
	Cash		260
	Paid a freight bill.		
17	Cash	4,000	
	Sales Revenue		4,000
	Cash sale.		
17	Cost of Goods Sold	2,360	
	Merchandise Inventory		2,360
	Recorded the cost of goods sold.		

Date	Accounts and Explanation	Debit	Credit
Jun. 18	Accounts Receivable	1,960	
	Sales Revenue ($2,000 − ($2,000 × 0.02))		1,960
	Sale on account less discount.		
18	Cost of Goods Sold	1,180	
	Merchandise Inventory		1,180
	Recorded the cost of goods sold.		
22	Refunds Payable	800	
	Cash		800
	To record refund.		
22	Merchandise Inventory	480	
	Estimated Returns Inventory		480
	To record cost of inventory returned.		
24	Accounts Payable	5,000	
	Cash ($5,000 − $150)		4,850
	Merchandise Inventory ($5,000 × 0.03)		150
	Paid within discount period.		
28	Cash	1,960	
	Accounts Receivable		1,960
	Cash collection within discount period.		
29	Accounts Payable ($1,600 − $640)	960	
	Cash		960
	Paid after discount period net of return.		
30	Sales Revenue	400	
	Refunds Payable		400
	To record estimated refunds.		
30	Estimated Returns Inventory	240	
	Cost of Goods Sold		240
	To record cost of estimated returns.		

CHAPTER 5

> Check Your Understanding 5-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

King Cornelius Company uses a perpetual inventory system. The adjusted trial balance of King Cornelius Company follows:

KING CORNELIUS COMPANY
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 5,600	
Accounts Receivable	37,100	
Merchandise Inventory	25,800	
Office Supplies	1,300	
Prepaid Rent	1,000	
Furniture	26,500	
Accumulated Depreciation—Furniture		$ 23,800
Accounts Payable		6,300
Salaries Payable		2,000
Interest Payable		600
Unearned Revenue		2,400
Notes Payable, long-term		35,000
Common Stock		20,000
Retained Earnings		2,200
Dividends	48,000	
Sales Revenue		226,000
Interest Revenue		2,000
Cost of Goods Sold	81,000	
Salaries Expense	72,700	
Rent Expense	7,700	
Utilities Expense	5,800	
Depreciation Expense—Furniture	2,700	
Supplies Expense	2,200	
Interest Expense	2,900	
Total	$ 320,300	$ 320,300

CHAPTER 5

Requirements

1. Prepare the company's multi-step income statement, statement of retained earnings, and balance sheet in report form for year ended December 31, 2018. Note: King Cornelius doesn't separate its operating expenses as either selling or administrative. (See Learning Objective 5.)
2. Journalize the closing entries at December 31, 2018. Post to the Income Summary account as an accuracy check on net income. Recall that the credit balance closed out of Income Summary should equal net income as computed on the income statement. Also post to Retained Earnings, whose balance should agree with the amount reported on the balance sheet. (See Learning Objective 4.)
3. Compute the gross profit percentage for 2018. (See Learning Objective 6.)

> Solution

Requirement 1

KING CORNELIUS COMPANY Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 226,000
Cost of Goods Sold		81,000
Gross Profit		145,000
Operating Expenses:		
Salaries Expense	$ 72,700	
Rent Expense	7,700	
Utilities Expense	5,800	
Depreciation Expense—Furniture	2,700	
Supplies Expense	2,200	
Total Operating Expenses		91,100
Operating Income		53,900
Other Income and (Expenses):		
Interest Revenue	2,000	
Interest Expense	(2,900)	
Total Other Income and (Expenses)		(900)
Net Income		$ 53,000

KING CORNELIUS COMPANY Statement of Retained Earnings Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 2,200
Net income for the year	53,000
	55,200
Dividends	(48,000)
Retained Earnings, December 31, 2018	$ 7,200

CHAPTER 5

KING CORNELIUS COMPANY Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 5,600	
Accounts Receivable	37,100	
Merchandise Inventory	25,800	
Office Supplies	1,300	
Prepaid Rent	1,000	
Total Current Assets		$ 70,800
Property, Plant, and Equipment:		
Furniture	26,500	
Less: Accumulated Depreciation—Furniture	(23,800)	
Total Property, Plant, and Equipment		2,700
Total Assets		$ 73,500
Liabilities		
Current Liabilities:		
Accounts Payable	$ 6,300	
Salaries Payable	2,000	
Interest Payable	600	
Unearned Revenue	2,400	
Total Current Liabilities		$ 11,300
Long-term Liabilities:		
Notes Payable		35,000
Total Liabilities		46,300
Stockholders' Equity		
Common Stock		20,000
Retained Earnings		7,200
Total Stockholders' Equity		27,200
Total Liabilities and Stockholders' Equity		$ 73,500

CHAPTER 5

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	226,000	
	Interest Revenue	2,000	
	Income Summary		228,000
	To close revenue accounts.		
31	Income Summary	175,000	
	Cost of Goods Sold		81,000
	Salaries Expense		72,700
	Rent Expense		7,700
	Utilities Expense		5,800
	Depreciation Expense—Furniture		2,700
	Supplies Expense		2,200
	Interest Expense		2,900
	To close expenses.		
31	Income Summary	53,000	
	Retained Earnings		53,000
	To close Income Summary.		
31	Retained Earnings	48,000	
	Dividends		48,000
	To close Dividends.		

Income Summary

Clos. 2	175,000	228,000	Clos. 1
		53,000	Bal.
Clos. 3	53,000		
		0	**Bal.**

Retained Earnings

		2,200	Adj. Bal.
Clos. 4	48,000	53,000	Clos. 3
		7,200	**Bal.**

Dividends

Adj. Bal.	48,000		
		48,000	Clos. 4
Bal.	0		

Requirement 3

Gross profit percentage = Gross profit / Net sales revenue = \$145,000 / \$226,000 = 0.642 = 64.2%

> Key Terms

Administrative Expenses (p. 271)
Cost of Goods Sold (COGS) (p. 251)
Credit Terms (p. 255)
FOB Destination (p. 258)
FOB Shipping Point (p. 258)
Freight In (p. 258)
Freight Out (p. 258)
Gross Profit (p. 252)
Gross Profit Percentage (p. 272)
Income Tax Expense (p. 271)
Inventory Shrinkage (p. 265)
Invoice (p. 253)
Merchandise Inventory (p. 250)
Merchandiser (p. 250)
Multi-Step Income Statement (p. 270)
Net Purchases (p. 276) (Appendix 5B)
Operating Expenses (p. 252)
Operating Income (p. 271)
Other Income and Expenses (p. 271)
Periodic Inventory System (p. 252)
Perpetual Inventory System (p. 252)
Purchase Allowance (p. 256)
Purchase Discount (p. 255)
Purchase Return (p. 256)
Retailer (p. 250)
Sales Discounts (p. 262)
Sales Returns and Allowances (p. 263)
Sales Revenue (p. 261)
Selling Expenses (p. 271)
Single-Step Income Statement (p. 269)
Vendor (p. 251)
Wholesaler (p. 250)

> Quick Check

Learning Objective 1

1. Which account does a merchandiser use that a service company does not use?
   a. Cost of Goods Sold
   b. Merchandise Inventory
   c. Sales Revenue
   d. All of the above

Learning Objective 1

2. The two main inventory accounting systems are the
   a. perpetual and periodic.
   b. purchase and sale.
   c. returns and allowances.
   d. cash and accrual.

Learning Objective 2

3. The journal entry for the purchase of inventory on account using the perpetual inventory system is

Date	Accounts and Explanation	Debit	Credit
a.	Merchandise Inventory	XXX	
	Accounts Receivable		XXX
b.	Accounts Payable	XXX	
	Merchandise Inventory		XXX
c.	Merchandise Inventory	XXX	
	Accounts Payable		XXX
d.	Merchandise Inventory	XXX	
	Cash		XXX

Learning Objective 2

4. JC Manufacturing purchased inventory for $5,300 and also paid a $260 freight bill. JC Manufacturing returned 45% of the goods to the seller and later took a 2% purchase discount. Assume JC Manufacturing uses a perpetual inventory system. What is JC Manufacturing's final cost of the inventory that it kept? (Round your answer to the nearest whole number.)
   a. $2,997
   b. $2,337
   c. $3,117
   d. $2,857

CHAPTER 5

Learning Objective 3

5. Austin Sound sold inventory for $300,000, terms 2/10, n/30. Cost of goods sold was $152,000. How much sales revenue will Austin Sound report from the sale?
   - a. $152,000
   - b. $294,000
   - c. $148,960
   - d. $300,000

Learning Objective 4

6. Suppose Dave's Discount's Merchandise Inventory account showed a balance of $8,000 before the year-end adjustments. The physical count of goods on hand totaled $7,400. Dave uses a perpetual inventory system. To adjust the accounts, which entry would the company make?

Date	Accounts and Explanation	Debit	Credit
a.	Cost of Goods Sold	600	
	Merchandise Inventory		600
b.	Merchandise Inventory	600	
	Accounts Receivable		600
c.	Accounts Payable	600	
	Merchandise Inventory		600
d.	Merchandise Inventory	600	
	Cost of Goods Sold		600

Learning Objective 4

7. Which of the following accounts would be closed at the end of the year using the perpetual inventory system?
   - a. Cost of Goods Sold
   - b. Merchandise Inventory
   - c. Accounts Receivable
   - d. Accounts Payable

Learning Objective 5

8. What is the order of the subtotals that appear on a multi-step income statement?
   - a. Gross Profit, Operating Income, Net Income, Total Other Income and Expenses
   - b. Operating Income, Gross Profit, Net Income, Total Other Income and Expenses
   - c. Total Other Income and Expenses, Operating Income, Gross Profit, Net Income
   - d. Gross Profit, Operating Income, Total Other Income and Expenses, Net Income

Learning Objective 6

9. Assume Juniper Natural Dyes made Net Sales Revenue of $90,000 and Cost of Goods Sold totaled $58,000. What was Juniper Natural Dyes's gross profit percentage for this period? (Round your answer to the nearest whole percent.)
   - a. 36%
   - b. 3.4 times
   - c. 64%
   - d. 17%

10A. League Automobiles sold an automobile for $24,000 on account. The cost of the automobile was $13,440. The sale of the automobile came with one year of free oil changes valued at $360. What would be the journal entry to record the sale?

Learning Objective 7
Appendix 5A

Date	Accounts and Explanation	Debit	Credit
a.	Accounts Receivable	24,000	
	Sales Revenue		24,000
	Cost of Goods Sold	13,440	
	Merchandise Inventory		13,440
b.	Accounts Receivable	24,360	
	Sales Revenue		24,000
	Unearned Revenue		360
	Cost of Goods Sold	13,440	
	Merchandise Inventory		13,440
c.	Accounts Receivable	24,000	
	Sales Revenue		23,640
	Service Revenue		360
	Cost of Goods Sold	13,440	
	Merchandise Inventory		13,440
d.	Accounts Receivable	24,000	
	Sales Revenue		23,640
	Unearned Revenue		360
	Cost of Goods Sold	13,440	
	Merchandise Inventory		13,440

11B. The journal entry for the purchase of inventory on account using the periodic inventory system is

Learning Objective 8
Appendix 5B

Date	Accounts and Explanation	Debit	Credit
a.	Purchases	XXX	
	Accounts Receivable		XXX
b.	Accounts Payable	XXX	
	Merchandise Inventory		XXX
c.	Merchandise Inventory	XXX	
	Accounts Payable		XXX
d.	Purchases	XXX	
	Accounts Payable		XXX

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a merchandiser, and what is the name of the merchandise that it sells?
2. What are the two types of merchandisers? How do they differ?
3. Describe the operating cycle of a merchandiser.
4. What is Cost of Goods Sold (COGS), and where is it reported?
5. How is gross profit calculated, and what does it represent?
6. What are the two types of inventory accounting systems? Briefly describe each.
7. What is an invoice?
8. What account is debited when recording a purchase of inventory when using the perpetual inventory system?
9. What would the credit terms of "2/10, n/EOM" mean?
10. What is a purchase return? How does a purchase allowance differ from a purchase return?
11. Describe FOB shipping point and FOB destination. When does the buyer take ownership of the goods, and who typically pays the freight?
12. How is the net cost of inventory calculated?
13. What are the two journal entries involved when recording the sale of inventory when using the perpetual inventory system?
14. Under the new revenue recognition standard, how is the sale of inventory recorded?
15. Under the new revenue recognition standard, what must companies do at the end of the period related to sales returns? Describe the journal entries that would be recorded.
16. When granting a sales allowance is there a return of merchandise inventory from the customer? Describe the journal entry(ies) that would be recorded.
17. What is freight out and how is it recorded by the seller?
18. What is inventory shrinkage? Describe the adjusting entry that would be recorded to account for inventory shrinkage.
19. What are the four steps involved in the closing process for a merchandising company?
20. Describe the single-step income statement.
21. Describe the multi-step income statement.
22. What financial statement is merchandise inventory reported on, and in what section?
23. What does the gross profit percentage measure, and how is it calculated?

24A. When a company has a contract involving multiple performance obligations, how must the company recognize revenue?

25B. What account is debited when recording a purchase of inventory when using a periodic inventory system?

26B. When recording purchase returns and purchase allowances under the periodic inventory system, what account is used?

27B. What account is debited when recording the payment of freight in when using the periodic inventory system?

28B. Describe the journal entry(ies) when recording a sale of inventory using the periodic inventory system.

29B. Is an adjusting entry needed for inventory shrinkage when using the periodic inventory system? Explain.

30B Highlight the differences in the closing process when using the periodic inventory system rather than the perpetual inventory system.

31B. Describe the calculation of cost of goods sold when using the periodic inventory system.

> Short Exercises

For all short exercises, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

S5-1 Comparing periodic and perpetual inventory systems — **Learning Objective 1**

For each statement below, identify whether the statement applies to the periodic inventory system, the perpetual inventory system, or both.

a. Normally used for relatively inexpensive goods.

b. Keeps a running computerized record of merchandise inventory.

c. Achieves better control over merchandise inventory.

d. Requires a physical count of inventory to determine the quantities on hand.

e. Uses bar codes to keep up-to-the-minute records of inventory.

S5-2 Journalizing purchase transactions — **Learning Objective 2**

Consider the following transactions for Toys and More:

May 8	Toys and More buys $113,300 worth of MegoBlock toys on account with credit terms of 2/10, n/60.
12	Toys and More returns $11,250 of the merchandise to MegoBlock due to damage during shipment.
15	Toys and More paid the amount due, less the return and discount.

Requirements

1. Journalize the purchase transactions. Explanations are not required.

2. In the final analysis, how much did the inventory cost Toys and More?

S5-3 Journalizing purchase transactions — **Learning Objective 2**

Consider the following transactions for Burlington Drug Store:

Feb. 2	Burlington buys $23,800 worth of inventory on account with credit terms of 2/15, n/30, FOB shipping point.
4	Burlington pays a $50 freight charge.
9	Burlington returns $5,200 of the merchandise due to damage during shipment.
14	Burlington paid the amount due, less return and discount.

Requirements

1. Journalize the purchase transactions. Explanations are not required.
2. In the final analysis, how much did the inventory cost Burlington Drug Store?

Learning Objective 3

S5-4 Journalizing sales transactions

Journalize the following sales transactions for Salem Sportswear. Explanations are not required. The company estimates sales returns at the end of each month.

Jul. 1	Salem sold $20,000 of men's sportswear for cash. Cost of goods sold is $10,000.
3	Salem sold $62,000 of women's sportswear on account, credit terms are 3/10, n/30. Cost of goods is $31,000.
5	Salem received a $4,500 sales return on damaged goods from the customer on July 1. Cost of goods damaged is $2,250.
10	Salem receives payment from the customer on the amount due, less discount.

Learning Objective 3

S5-5 Estimating sales returns

On December 31, Jack Photography Supplies estimated that approximately 2% of merchandise sold will be returned. Sales Revenue for the year was $80,000 with a cost of $48,000. Journalize the adjusting entries needed to account for the estimated returns.

Learning Objectives 2, 3

S5-6 Journalizing purchase and sales transactions

Suppose Piranha.com sells 3,500 books on account for $17 each (cost of these books is $35,700) on October 10, 2018 to The Textbook Store. One hundred of these books (cost $1,020) were damaged in shipment, so Piranha.com later received the damaged goods from The Textbook Store as sales returns on October 13, 2018.

Requirements

1. Journalize The Textbook Store's October 2018 transactions.
2. Journalize Piranha.com's October 2018 transactions. The company estimates sales returns at the end of each month.

Learning Objectives 2, 3

S5-7 Journalizing purchase and sales transactions

On November 4, 2018, Cain Company sold merchandise inventory on account to Tarin Wholesalers, $12,000, that cost $4,800. Terms 3/10, n/30. On November 5, 2018, Tarin Wholesalers paid shipping of $30. Tarin Wholesalers paid the balance to Cain Company on November 13, 2018.

Requirements

1. Journalize Tarin Wholesaler's November transactions.
2. Journalize Cain Company's November transactions.

Learning Objective 4

S5-8 Adjusting for inventory shrinkage

Jeana's Furniture's unadjusted Merchandise Inventory account at year-end is $69,000. The physical count of inventory came up with a total of $67,600. Journalize the adjusting entry needed to account for inventory shrinkage.

Learning Objective 4

S5-9 Journalizing closing entries

Rocky RV Center's accounting records include the following accounts at December 31, 2018.

Cost of Goods Sold	$ 372,000	Accumulated Depreciation—Building	$ 38,000
Accounts Payable	16,000	Cash	47,000
Rent Expense	26,000	Sales Revenue	636,500
Building	113,000	Depreciation Expense—Building	13,000
Common Stock	115,000	Dividends	58,000
Retained Earnings	83,100	Interest Revenue	14,000
Merchandise Inventory	239,600		
Notes Receivable	34,000		

Requirements

1. Journalize the required closing entries for Rocky.
2. Determine the ending balance in the Retained Earnings account.

Use the following information to answer Short Exercises S5-10 and S5-11.

Camilia Communications reported the following figures from its adjusted trial balance for its first year of business, which ended on July 31, 2018:

Cash	$ 2,900	Cost of Goods Sold	$ 18,700
Selling Expenses	1,400	Equipment, net	9,500
Accounts Payable	4,300	Accrued Liabilities	1,800
Common Stock	4,365	Net Sales Revenue	29,200
Notes Payable, long-term	500	Accounts Receivable	3,200
Merchandise Inventory	1,100	Interest Expense	65
Administrative Expenses	3,300		

Learning Objective 5

S5-10 Preparing a merchandiser's income statement

Prepare Camilia Communications's multi-step income statement for the year ended July 31, 2018.

Learning Objective 5

S5-11 Preparing a merchandiser's statement of retained earnings and balance sheet

Requirements

1. Prepare Camilia Communications's statement of retained earnings for the year ended July 31, 2018. Assume that there were no dividends declared during the year and that the business began on August 1, 2017.
2. Prepare Camilia Communications's classified balance sheet at July 31, 2018. Use the report format.

Learning Objective 6

S5-12 Computing the gross profit percentage

Macarthy Landscape Supply's selected accounts as of December 31, 2018, follow. Compute the gross profit percentage for 2018.

Selling Expenses	$ 12,900
Interest Revenue	900
Net Sales Revenue	134,700
Cost of Goods Sold	114,000
Administrative Expenses	10,200

Learning Objective 7
Appendix 5A

S5A-13 Journalizing multiple performance obligations

Journalize the following sales transactions for King Company. Explanations are not required.

Apr. 1	King Company sold merchandise inventory for $150. The cost of the inventory was $90. The customer paid cash. King Company was running a promotion and the customer received a $20 award at the time of sale that can be used at a future date on any King Company merchandise.
May 15	The customer uses the $20 award when purchasing merchandise inventory for $30. The cost of the inventory was $18. The customer paid cash.

Learning Objective 8
Appendix 5B

S5B-14 Journalizing purchase transactions—periodic inventory system

Consider the following transactions for Garman Packing Supplies:

Apr. 10	Garman Packing Supplies buys $175,000 worth of merchandise inventory on account with credit terms of 1/10, n/30.
12	Garman returns $15,200 of the merchandise to the vendor due to damage during shipment.
19	Garman paid the amount due, less the return and discount.

Requirements

1. Journalize the purchase transactions assuming Garman Packing Supplies uses the periodic inventory system. Explanations are not required.
2. What is the amount of net purchases?

Learning Objective 8
Appendix 5B

S5B-15 Journalizing sales transactions—periodic inventory system

Journalize the following sales transactions for Sanborn Camera Store using the periodic inventory system. Explanations are not required.

Dec. 3	Sanborn sold $41,900 of camera equipment on account, credit terms are 3/15, n/EOM.
17	Sanborn receives payment from the customer on the amount due less the discount.

CHAPTER 5

S5B-16 Journalizing closing entries—periodic inventory system

Learning Objective 8
Appendix 5B

D & T Printing Supplies's accounting records include the following accounts at December 31, 2018.

Purchases	$ 185,200	Accumulated Depreciation—Building	$ 21,000
Accounts Payable	7,700	Cash	18,100
Rent Expense	8,600	Sales Revenue	257,800
Building	42,800	Depreciation Expense—Building	4,700
Common Stock	55,000	Dividends	26,500
Retained Earnings	30,400	Interest Expense	1,900
Merchandise Inventory, Beginning	119,000	Merchandise Inventory, Ending	102,100
Notes Payable	11,300	Purchase Returns and Allowances	20,700
Purchase Discounts	2,900		

Requirements

1. Journalize the required closing entries for D & T Printing Supplies assuming that D & T uses the periodic inventory system.
2. Determine the ending balance in the Retained Earnings account.

S5B-17 Computing cost of goods sold in a periodic inventory system

Learning Objective 8
Appendix 5B

M Wholesale Company began the year with merchandise inventory of $5,000. During the year, M purchased $93,000 of goods and returned $6,600 due to damage. M also paid freight charges of $1,200 on inventory purchases. At year-end, M's ending merchandise inventory balance stood at $17,200. Assume that M uses the periodic inventory system. Compute M's cost of goods sold for the year.

> Exercises

For all exercises, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

E5-18 Using accounting vocabulary

Learning Objectives 1, 2, 3

Match the accounting terms with the corresponding definitions.

1. Credit Terms
2. FOB Destination
3. Invoice
4. Cost of Goods Sold
5. Purchase Allowance
6. FOB Shipping Point
7. Wholesaler
8. Purchase Discount
9. Retailer

a. The cost of the merchandise inventory that the business has sold to customers.
b. An amount granted to the purchaser as an incentive to keep goods that are not "as ordered."
c. A type of merchandiser that buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers.
d. A situation in which the buyer takes ownership (title) at the delivery destination point.
e. A type of merchandiser that buys goods from manufacturers and then sells them to retailers.
f. A discount that businesses offer to purchasers as an incentive for early payment.
g. A situation in which the buyer takes title to the goods after the goods leave the seller's place of business.
h. The terms of purchase or sale as stated on the invoice.
i. A seller's request for cash from the purchaser.

Learning Objective 2

3. Oct. 1 Cash $769.35

E5-19 Journalizing purchase transactions from an invoice

Kingston Tires received the following invoice from a supplier (Fields Distribution, Inc.):

FIELDS DISTRIBUTION, INC.
7290 S. Prospect Street
Ravenna, OH 44266

Invoice date: September 23, 2018

Sold to: Kingston Tires
6678 Diamond Avenue
Ravenna, OH 44266

Payment terms: 1/10, n/30

Description	Quantity Shipped	Price	Amount
D39–X4 Radials	4	$38.12	$152.48
M223 Belted-bias	10	42.84	428.40
Q92 Truck tires	6	58.12	348.72
Total			$929.60

Due date:	Amount:
October 3, 2018	$920.30
October 4 through October 23, 2018	$929.60

Requirements

1. Journalize the transaction required by Kingston Tires on September 23, 2018. Do not round numbers to the nearest whole dollar. Assume tires are purchased on account.
2. Journalize the return on Kingston's books on September 28, 2018, of the D39–X4 Radials, which were ordered by mistake. Do not round numbers to the nearest whole dollar.
3. Journalize the payment on October 1, 2018, to Fields Distribution, Inc. Do not round numbers to the nearest whole dollar.

Learning Objective 2

July 24 Merch. Inv. $64 CR

E5-20 Journalizing purchase transactions

Howie Jewelers had the following purchase transactions. Journalize all necessary transactions. Explanations are not required.

Jun. 20	Purchased inventory of $5,100 on account from Sanders Diamonds, a jewelry importer. Terms were 2/15, n/45, FOB shipping point.
20	Paid freight charges, $400.
Jul. 4	Returned $600 of inventory to Sanders.
14	Paid Sanders Diamonds, less return.
16	Purchased inventory of $3,500 on account from Southboro Diamonds, a jewelry importer. Terms were 2/10, n/EOM, FOB destination.
18	Received a $300 allowance from Southboro Diamonds for damaged but usable goods.
24	Paid Southboro Diamonds, less allowance and discount.

E5-21 Journalizing sales transactions

Learning Objective 3

Journalize the following sales transactions for Antique Mall. Explanations are not required. The company estimates sales returns at the end of each month.

Jan. 4	Sold $16,000 of antiques on account, credit terms are n/30. Cost of goods is $8,000.
8	Received a $300 sales return on damaged goods from the customer. Cost of goods damaged is $150.
13	Antique Mall received payment from the customer on the amount due from Jan. 4, less the return.
20	Sold $4,900 of antiques on account, credit terms are 1/10, n/45, FOB destination. Cost of goods is $2,450.
20	Antique Mall paid $70 on freight out.
29	Received payment from the customer on the amount due from Jan. 20, less the discount.

E5-22 Journalizing purchase and sales transactions

Learning Objectives 2, 3

Journalize the following transactions for Soul Art Gift Shop. Explanations are not required.

Feb. 3	Purchased $3,300 of merchandise inventory on account under terms 3/10, n/EOM and FOB shipping point.
7	Returned $900 of defective merchandise purchased on February 3.
9	Paid freight bill of $400 on February 3 purchase.
10	Sold merchandise inventory on account for $4,700. Payment terms were 2/15, n/30. These goods cost the company $2,350.
12	Paid amount owed on credit purchase of February 3, less the return and the discount.
28	Received cash from February 10 customer in full settlement of their debt.

Use the following information to answer Exercises E5-23 through E5-25.

The adjusted trial balance of Quality Office Systems at March 31, 2018, follows:

QUALITY OFFICE SYSTEMS Adjusted Trial Balance March 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 3,700	
Accounts Receivable	13,300	
Merchandise Inventory	31,500	
Office Supplies	6,300	
Equipment	42,900	
Accumulated Depreciation—Equipment		$ 13,900
Accounts Payable		9,200
Salaries Payable		800
Notes Payable, long-term		8,600
Common Stock		18,000
Retained Earnings		4,950
Dividends	41,500	
Sales Revenue		235,700
Cost of Goods Sold	107,550	
Selling Expense	27,400	
Administrative Expense	14,200	
Interest Expense	2,800	
Total	$ 291,150	$ 291,150

CHAPTER 5

Learning Objective 4

2. Ending Retained Earnings Balance $47,200

E5-23 Journalizing closing entries

Requirements

1. Journalize the required closing entries at March 31, 2018.
2. Set up T-accounts for Income Summary; Retained Earnings; and Dividends. Post the closing entries to the T-accounts, and calculate their ending balances.
3. How much was Quality Office's net income or net loss?

Learning Objective 5

Net Income $83,750

E5-24 Preparing a single-step income statement

Prepare Quality Office's single-step income statement for the year ended March 31, 2018.

Learning Objective 5

Gross Profit $128,150

E5-25 Preparing a multi-step income statement

Prepare Quality Office's multi-step income statement for the year ended March 31, 2018.

E5-26 Journalizing adjusting entries including estimating sales returns

Learning Objectives 3, 4

Emerson St. Book Shop's unadjusted Merchandise Inventory at June 30, 2018 was $5,200. The cost associated with the physical count of inventory on hand on June 30, 2018, was $4,900. In addition, Emerson St. Book Shop estimated approximately $1,000 of merchandise sold will be returned with a cost of $400.

Requirements

1. Journalize the adjustment for inventory shrinkage.
2. Journalize the adjustment for estimated sales returns.

E5-27 Computing the gross profit percentage

Learning Objective 6

Crazy Cookies earned net sales revenue of $66,000,000 in 2018. Cost of goods sold was $39,600,000, and net income reached $7,000,000, the company's highest ever. Compute the company's gross profit percentage for 2018.

E5A-28 Journalizing multiple performance obligations and sales transactions

Learning Objectives 3, 7
Appendix 5A

Journalize the following sales transactions for Morris Supply. Explanations are not required.

Mar. 1	Morris Supply sold merchandise inventory for $3,000. The cost of the inventory was $1,800. The customer paid cash. Morris Supply was running a promotion and the customer received a $150 award at the time of sale that can be used at a future date on any Morris Supply merchandise.
3	Sold $6,000 of supplies on account. Credit terms are 2/10, n/45, FOB destination. Cost of goods is $3,600.
10	Received payment from the customer on the amount due from March 3, less the discount.
Apr. 15	The customer used the $150 award when purchasing merchandise inventory for $200, the cost of the inventory was $120. The customer paid cash.

E5B-29 Journalizing purchase transactions—periodic inventory system

Learning Objective 8
Appendix 5B

Lawrence Appliances had the following purchase transactions. Journalize all necessary transactions using the periodic inventory system. Explanations are not required.

Sep. 4	Purchased inventory of $6,900 on account from Max Appliance Wholesale, an appliance wholesaler. Terms were 3/15, n/30, FOB shipping point.
4	Paid freight charges, $480.
10	Returned $300 of inventory to Max.
17	Paid Max Appliance Wholesale, less return and discount.
20	Purchased inventory of $3,900 on account from MY Appliance, an appliance wholesaler. Terms were 1/10, n/45, FOB destination.
22	Received a $400 allowance from MY Appliance for damaged but usable goods.
29	Paid MY Appliance, less allowance and discount.

Learning Objective 8
Appendix 5B

E5B-30 Journalizing sales transactions—periodic inventory system

Journalize the following sales transactions for Straight Shot Archery using the periodic inventory system. Explanations are not required. The company estimates sales returns and allowances at the end of each month.

Aug. 1	Sold $6,500 of equipment on account, credit terms are 1/10, n/30.
8	Straight Shot received payment from the customer on the amount due from August 1, less the discount.
15	Sold $3,100 of equipment on account, credit terms are n/45, FOB destination.
15	Straight Shot paid $90 on freight out.
20	Straight Shot negotiated a $500 allowance on the goods sold on August 15.
24	Received payment from the customer on the amount due from August 15, less the allowance.

Learning Objective 8
Appendix 5B

E5B-31 Journalizing purchase and sales transactions—periodic inventory system

Journalize the following transactions for Master Bicycles using the periodic inventory system. Explanations are not required.

Nov. 2	Purchased $3,400 of merchandise inventory on account under terms 2/10, n/EOM and FOB shipping point.
6	Returned $800 of defective merchandise purchased on November 2.
8	Paid freight bill of $100 on November 2 purchase.
10	Sold merchandise inventory on account for $6,100. Payment terms were 3/15, n/45.
11	Paid amount owed on credit purchase of November 2, less the return and the discount.
22	Received cash from November 10 customer in full settlement of their debt, less the discount.

E5B-32 Journalizing closing entries—periodic inventory system

Learning Objective 8
Appendix 5B

2. Ending Retained Earnings Balance $71,100

Ocean Life Boat Supply uses the periodic inventory method. The adjusted trial balance of Ocean Life Boat Supply at December 31, 2018, follows:

OCEAN LIFE BOAT SUPPLY Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	$ 4,200	
Accounts Receivable	15,100	
Merchandise Inventory (beginning)	44,500	
Office Supplies	8,300	
Equipment	59,300	
Accumulated Depreciation—Equipment		$ 19,800
Accounts Payable		12,600
Salaries Payable		1,600
Notes Payable, long-term		11,100
Common Stock		25,000
Retained Earnings		34,100
Dividends	60,600	
Sales Revenue		315,800
Interest Revenue		3,400
Purchases	274,500	
Purchase Returns and Allowances		94,600
Purchase Discounts		9,000
Selling Expense	38,600	
Administrative Expense	21,900	
Total	$ 527,000	$ 527,000

Requirements

1. Journalize the required closing entries at December 31, 2018. Assume ending Merchandise Inventory is $54,300.
2. Set up T-accounts for Income Summary; Retained Earnings; and Dividends. Post the closing entries to the T-accounts, and calculate their ending balances.
3. How much was Ocean Life's net income or net loss?

CHAPTER 5

Learning Objective 8
Appendix 5B

E5B-33 Computing cost of goods sold in a periodic inventory system

Clink Electric uses the periodic inventory system. Clink reported the following selected amounts at May 31, 2018:

Merchandise Inventory, June 1, 2017	$ 16,000	Freight In	$ 6,000
Merchandise Inventory, May 31, 2018	21,500	Net Sales Revenue	138,000
Purchases	81,000	Common Stock	32,000
Purchase Discounts	3,000	Retained Earnings	17,000
Purchase Returns and Allowances	6,600		

Compute the following for Clink:

a. Cost of goods sold.

b. Gross profit.

> Problems Group A

For all problems, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

Learning Objectives 2, 3

P5-34A Journalizing purchase and sale transactions

Journalize the following transactions that occurred in September 2018 for Aquamarines. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Aquamarines estimates sales returns at the end of each month.

Sep. 3	Purchased merchandise inventory on account from Sharpner Wholesalers, $5,500. Terms 2/15, n/EOM, FOB shipping point.
4	Paid freight bill of $85 on September 3 purchase.
4	Purchased merchandise inventory for cash of $1,600.
6	Returned $1,300 of inventory from September 3 purchase.
8	Sold merchandise inventory to Herman Company, $5,700, on account. Terms 2/15, n/35. Cost of goods, $2,565.
9	Purchased merchandise inventory on account from Tucker Wholesalers, $6,000. Terms 3/10, n/30, FOB destination.
10	Made payment to Sharpner Wholesalers for goods purchased on September 3, less return and discount.
12	Received payment from Herman Company, less discount.
13	After negotiations, received a $500 allowance from Tucker Wholesalers.
15	Sold merchandise inventory to Jerome Company, $2,800, on account. Terms n/EOM. Cost of goods, $1,200.
22	Made payment, less allowance, to Tucker Wholesalers for goods purchased on September 9.
23	Jerome Company returned $200 of the merchandise sold on September 15. Cost of goods, $80.
25	Sold merchandise inventory to Small for $1,800 on account that cost $738. Terms of 3/10, n/30 was offered, FOB shipping point. As a courtesy to Small, $40 of freight was added to the invoice for which cash was paid by Aquamarines.
29	Received payment from Small, less discount.
30	Received payment from Jerome Company, less return.

CHAPTER 5

P5-35A Journalizing purchase and sale transactions

Learning Objectives 2, 3

Journalize the following transactions that occurred in November 2018 for Julie's Fun World. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Julie's Fun World estimates sales returns at the end of each month.

Nov. 4	Purchased merchandise inventory on account from Vera Company, $5,000. Terms 3/10, n/EOM, FOB shipping point.
6	Paid freight bill of $100 on November 4 purchase.
8	Returned half the inventory purchased on November 4 from Vera Company.
10	Sold merchandise inventory for cash, $1,100. Cost of goods, $400. FOB destination.
11	Sold merchandise inventory to Geary Corporation, $11,100, on account, terms of 2/10, n/EOM. Cost of goods, $6,105. FOB shipping point.
12	Paid freight bill of $20 on November 10 sale.
13	Sold merchandise inventory to Caldwell Company, $9,500, on account, terms of n/45. Cost of goods, $5,225. FOB shipping point.
14	Paid the amount owed on account from November 4, less return and discount.
17	Received defective inventory as a sales return from the November 13 sale, $500. Cost of goods, $275.
18	Purchased inventory of $3,600 on account from Rainman Corporation. Payment terms were 2/10, n/30, FOB destination.
20	Received cash from Geary Corporation, less discount.
26	Paid amount owed on account from November 18, less discount.
28	Received cash from Caldwell Company, less return.
29	Purchased inventory from Sandra Corporation for cash, $12,300, FOB shipping point. Freight in paid to shipping company, $170.

Learning Objectives 4, 5

1. Operating Income $67,900

P5-36A Preparing a multi-step income statement, journalizing closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Rachael Rey Music Company at June 30, 2018, follows:

RACHAEL REY MUSIC COMPANY
Adjusted Trial Balance
June 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,000	
Accounts Receivable	38,400	
Merchandise Inventory	18,100	
Office Supplies	300	
Furniture	39,900	
Accumulated Depreciation—Furniture		$ 8,200
Accounts Payable		13,800
Salaries Payable		850
Unearned Revenue		7,500
Notes Payable, long-term		17,000
Common Stock		6,000
Retained Earnings		21,350
Dividends	40,000	
Sales Revenue		184,000
Cost of Goods Sold	85,500	
Selling Expense	18,600	
Administrative Expense	12,000	
Interest Expense	1,900	
Total	$ 258,700	$ 258,700

Requirements

1. Prepare Rachael Rey's multi-step income statement for the year ended June 30, 2018.
2. Journalize Rachael Rey's closing entries.
3. Prepare a post-closing trial balance as of June 30, 2018.

CHAPTER 5

P5-37A Journalizing adjusting entries, preparing adjusted trial balance, and preparing multi-step income statement

Learning Objectives 4, 5

2. Total Credits $463,300

The unadjusted trial balance for Trudel Electronics Company at March 31, 2018, follows:

TRUDEL ELECTRONICS COMPANY Unadjusted Trial Balance March 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,000	
Accounts Receivable	38,800	
Merchandise Inventory	45,500	
Office Supplies	6,500	
Equipment	130,000	
Accumulated Depreciation—Equipment		$ 36,800
Accounts Payable		17,400
Unearned Revenue		13,200
Notes Payable, long-term		48,000
Common Stock		60,000
Retained Earnings		100
Dividends	20,000	
Sales Revenue		282,500
Cost of Goods Sold	160,600	
Salaries Expense (Selling)	20,000	
Rent Expense (Selling)	15,800	
Salaries Expense (Administrative)	5,700	
Utilities Expense (Administrative)	11,100	
Total	$ 458,000	$ 458,000

Requirements

1. Journalize the adjusting entries using the following data:
   a. Interest revenue accrued, $200.
   b. Salaries (Selling) accrued, $2,300.
   c. Depreciation Expense—Equipment (Administrative), $1,300.
   d. Interest expense accrued, $1,500.
   e. A physical count of inventory was completed. The ending Merchandise Inventory should have a balance of $45,200.
   f. Trudel estimates that approximately $6,000 of merchandise sold will be returned with a cost of $1,200.
2. Prepare Trudel Electronics's adjusted trial balance as of March 31, 2018.
3. Prepare Trudel Electronics's multi-step income statement for year ended March 31, 2018.

Learning Objectives 5, 6

2. Operating Income $93,120

P5-38A Preparing a single-step income statement, preparing a multi-step income statement, and computing the gross profit percentage

The records of Farm Quality Steak Company list the following selected accounts for the quarter ended April 30, 2018:

Interest Revenue	$ 400	Accounts Payable	$ 17,700
Merchandise Inventory	45,000	Accounts Receivable	38,200
Notes Payable, long-term	54,000	Accumulated Depreciation—Equipment	37,700
Salaries Payable	2,800	Common Stock	30,000
Net Sales Revenue	298,000	Retained Earnings	5,380
Rent Expense (Selling)	15,100	Dividends	25,000
Salaries Expense (Administrative)	2,000	Cash	7,100
Office Supplies	6,500	Cost of Goods Sold	154,960
Unearned Revenue	13,100	Equipment	132,000
Interest Expense	2,100	Interest Payable	1,700
Depreciation Expense—Equipment (Administrative)	1,320	Rent Expense (Administrative)	7,100
Utilities Expense (Administrative)	4,600	Salaries Expense (Selling)	6,000
Delivery Expense (Selling)	3,800	Utilities Expense (Selling)	10,000

Requirements

1. Prepare a single-step income statement.
2. Prepare a multi-step income statement.
3. M. Doherty, manager of the company, strives to earn a gross profit percentage of at least 50%. Did Farm Quality achieve this goal? Show your calculations.

Learning Objective 8
Appendix 5B

P5B-39A Journalizing purchase and sale transactions—periodic inventory system

Journalize the following transactions that occurred in March 2018 for Double Company. Assume Double uses the periodic inventory system. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Double estimates sales returns at the end of each month.

Mar. 3	Purchased merchandise inventory on account from Sidecki Wholesalers, $5,500. Terms 2/15, n/EOM, FOB shipping point.
4	Paid freight bill of $70 on March 3 purchase.
4	Purchased merchandise inventory for cash of $1,100.
6	Returned $900 of inventory from March 3 purchase.
8	Sold merchandise inventory to Herrick Company, $3,400, on account. Terms 1/15, n/35.
9	Purchased merchandise inventory on account from Tex Wholesalers, $5,600. Terms 2/10, n/30, FOB destination.
10	Made payment to Sidecki Wholesalers for goods purchased on March 3, less return and discount.
12	Received payment from Herrick Company, less discount.
13	After negotiations, received a $500 allowance from Tex Wholesalers.
15	Sold merchandise inventory to Jesper Company, $1,700, on account. Terms n/EOM.
22	Made payment, less allowance, to Tex Wholesalers for goods purchased on March 9.
23	Jesper Company returned $300 of the merchandise sold on March 15.
25	Sold merchandise inventory to Salter for $1,000 on account. Terms of 1/10, n/30 was offered, FOB shipping point.
29	Received payment from Salter, less discount.
30	Received payment from Jesper Company, less return.

P5B-40A Preparing a multi-step income statement and journalizing closing entries

Learning Objective 8
Appendix 5B

1. Gross Profit $192,600

Triton Department Store uses a periodic inventory system. The adjusted trial balance of Triton Department Store at December 31, 2018, follows:

TRITON DEPARTMENT STORE Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 8,200	
Accounts Receivable	84,600	
Merchandise Inventory (beginning)	37,800	
Office Supplies	850	
Furniture	86,000	
Accumulated Depreciation—Furniture		$ 18,500
Accounts Payable		29,400
Salaries Payable		2,300
Unearned Revenue		14,900
Notes Payable, long-term		36,000
Common Stock		60,000
Retained Earnings		22,850
Dividends	88,600	
Sales Revenue		374,000
Purchases	295,000	
Purchase Returns and Allowances		109,000
Purchase Discounts		6,400
Freight In	300	
Selling Expense	41,700	
Administrative Expense	26,600	
Interest Expense	3,700	
Total	$ 673,350	$ 673,350

Requirements

1. Prepare Triton Department Store's multi-step income statement for the year ended December 31, 2018. Assume ending Merchandise Inventory is $36,300.
2. Journalize Triton Department Store's closing entries.

CHAPTER 5

> Problems Group B

For all problems, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

Learning Objectives 2, 3

P5-41B Journalizing purchase and sale transactions

Journalize the following transactions that occurred in February 2018 for Oceanic. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Oceanic estimates sales returns at the end of each month.

Feb. 3	Purchased merchandise inventory on account from Silton Wholesalers, $5,200. Terms 2/15, n/EOM, FOB shipping point.
4	Paid freight bill of $70 on February 3 purchase.
4	Purchased merchandise inventory for cash of $1,500.
6	Returned $900 of inventory from February 3 purchase.
8	Sold merchandise inventory to Herenda Company, $5,600, on account. Terms 3/15, n/35. Cost of goods, $2,352.
9	Purchased merchandise inventory on account from Teddy Wholesalers, $7,000. Terms 1/10, n/30, FOB destination.
10	Made payment to Silton Wholesalers for goods purchased on February 3, less return and discount.
12	Received payment from Herenda Company, less discount.
13	After negotiations, received a $500 allowance from Teddy Wholesalers.
15	Sold merchandise inventory to Jordon Company, $3,400, on account. Terms n/EOM. Cost of goods, $1,496.
22	Made payment, less allowance, to Teddy Wholesalers for goods purchased on February 9.
23	Jordon Company returned $1,000 of the merchandise sold on February 15. Cost of goods, $440.
25	Sold merchandise inventory to Smith for $1,700 on account that cost $663. Terms of 2/10, n/30 were offered, FOB shipping point. As a courtesy to Smith, $70 of freight was added to the invoice for which cash was paid by Oceanic.
27	Received payment from Smith, less discount.
28	Received payment from Jordon Company, less return.

P5-42B Journalizing purchase and sale transactions

Learning Objectives 2, 3

Journalize the following transactions that occurred in January 2018 for Sylvia's Amusements. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Sylvia estimates sales returns at the end of each month.

Jan. 4	Purchased merchandise inventory on account from Vanderbilt Company, $7,000. Terms 1/10, n/EOM, FOB shipping point.
6	Paid freight bill of $100 on January 4 purchase.
8	Returned half the inventory purchased on January 4 from Vanderbilt Company.
10	Sold merchandise inventory for cash, $1,600. Cost of goods, $640. FOB destination.
11	Sold merchandise inventory to Graceland Corporation, $10,800, on account, terms of 1/10, n/EOM. Cost of goods, $5,400. FOB shipping point.
12	Paid freight bill of $60 on January 10 sale.
13	Sold merchandise inventory to Cabbell Company, $9,500, on account, terms of n/45. Cost of goods, $5,225. FOB shipping point.
14	Paid the amount owed on account from January 4, less return and discount.
17	Received defective inventory as a sales return from the January 13 sale, $600. Cost of goods, $300.
18	Purchased inventory of $4,600 on account from Roberts Corporation. Payment terms were 3/10, n/30, FOB destination.
20	Received cash from Graceland Corporation, less discount.
26	Paid amount owed on account from January 18, less discount.
28	Received cash from Cabbell Company, less return.
29	Purchased inventory from Sandra Corporation for cash, $11,600, FOB shipping point. Freight in paid to shipping company, $240.

Learning Objectives 4, 5

1. Operating Income $59,800

P5-43B Preparing a multi-step income statement, journalizing closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Rockin Robbin Dance Company at April 30, 2018, follows:

ROCKIN ROBBIN DANCE COMPANY
Adjusted Trial Balance
April 30, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,400	
Accounts Receivable	38,000	
Merchandise Inventory	17,800	
Office Supplies	850	
Furniture	39,900	
Accumulated Depreciation—Furniture		$ 8,300
Accounts Payable		14,100
Salaries Payable		1,000
Unearned Revenue		6,500
Notes Payable, long-term		12,000
Common Stock		5,000
Retained Earnings		36,150
Dividends	40,000	
Sales Revenue		178,500
Cost of Goods Sold	83,700	
Selling Expense	19,000	
Administrative Expense	16,000	
Interest Expense	1,900	
Total	$ 261,550	$ 261,550

Requirements

1. Prepare Rockin Robbin's multi-step income statement for the year ended April 30, 2018.
2. Journalize Rockin Robbin's closing entries.
3. Prepare a post-closing trial balance as of April 30, 2018.

P5-44B Journalizing adjusting entries, preparing adjusted trial balance, and preparing multi-step income statement

Learning Objectives 4, 5

2. Total Credits $480,345

The unadjusted trial balance for Tuttle Electronics Company follows:

TUTTLE ELECTRONICS COMPANY Unadjusted Trial Balance October 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 4,200	
Accounts Receivable	33,800	
Merchandise Inventory	45,700	
Office Supplies	5,700	
Equipment	129,500	
Accumulated Depreciation—Equipment		$ 37,200
Accounts Payable		15,600
Unearned Revenue		13,400
Notes Payable, long-term		53,000
Common Stock		48,000
Retained Earnings		6,700
Dividends	27,000	
Sales Revenue		300,300
Cost of Goods Sold	171,600	
Salaries Expense (Selling)	26,000	
Rent Expense (Selling)	15,400	
Salaries Expense (Administrative)	4,800	
Utilities Expense (Administrative)	10,500	
Total	$ 474,200	$ 474,200

Requirements

1. Journalize the adjusting entries using the following data:
   - **a.** Interest revenue accrued, $550.
   - **b.** Salaries (Selling) accrued, $2,800.
   - **c.** Depreciation Expense—Equipment (Administrative), $1,295.
   - **d.** Interest expense accrued, $1,500.
   - **e.** A physical count of inventory was completed. The ending Merchandise Inventory should have a balance of $45,300.
   - **f.** Tuttle estimates that approximately $6,200 of merchandise sold will be returned with a cost of $2,480.
2. Prepare Tuttle Electronics's adjusted trial balance as of October 31, 2018.
3. Prepare Tuttle Electronics's multi-step income statement for year ended October 31, 2018.

CHAPTER 5

Learning Objectives 5, 6

2. Operating Income $80,890

P5-45B Preparing a single-step income statement, preparing a multi-step income statement, and computing the gross profit percentage

The records of Grade A Beef Company list the following selected accounts for the quarter ended September 30, 2018:

Interest Revenue	$ 900	Accounts Payable	$ 17,000
Merchandise Inventory	46,300	Accounts Receivable	33,500
Notes Payable, long-term	47,000	Accumulated Depreciation—Equipment	36,500
Salaries Payable	2,600	Common Stock	38,000
Net Sales Revenue	294,000	Retained Earnings	3,610
Rent Expense (Selling)	16,700	Dividends	15,000
Salaries Expense (Administrative)	2,500	Cash	7,300
Office Supplies	5,800	Cost of Goods Sold	161,700
Unearned Revenue	13,800	Equipment	131,000
Interest Expense	2,300	Interest Payable	900
Depreciation Expense—Equipment (Administrative)	1,310	Rent Expense (Administrative)	7,400
Utilities Expense (Administrative)	4,500	Salaries Expense (Selling)	5,000
Delivery Expense (Selling)	3,100	Utilities Expense (Selling)	10,900

Requirements

1. Prepare a single-step income statement.
2. Prepare a multi-step income statement.
3. J. Douglas, manager of the company, strives to earn a gross profit percentage of at least 50%. Did Grade A Beef achieve this goal? Show your calculations.

CHAPTER 5

Learning Objective 8
Appendix 5B

P5-46B Journalizing purchase and sale transactions—periodic inventory system

Journalize the following transactions that occurred in June 2018 for Daley Company. Assume Daley uses the periodic inventory system. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Daley estimates sales returns at the end of each month.

Jun. 3	Purchased merchandise inventory on account from Sherry Wholesalers, \$5,500. Terms 3/15, n/EOM, FOB shipping point.
4	Paid freight bill of \$42 on June 3 purchase.
4	Purchased merchandise inventory for cash of \$1,100.
6	Returned \$200 of inventory from June 3 purchase.
8	Sold merchandise inventory to Henrich Company, \$4,400, on account. Terms 2/15, n/35.
9	Purchased merchandise inventory on account from Tex Wholesalers, \$4,600. Terms 1/10, n/30, FOB destination.
10	Made payment to Sherry Wholesalers for goods purchased on June 3, less return and discount.
12	Received payment from Henrich Company, less discount.
13	After negotiations, received a \$300 allowance from Tex Wholesalers.
15	Sold merchandise inventory to Jarvis Company, \$1,500, on account. Terms n/EOM.
22	Made payment, less allowance, to Tex Wholesalers for goods purchased on June 9.
23	Jarvis Company returned \$100 of the merchandise sold on June 15.
25	Sold merchandise inventory to Smith for \$700 on account. Terms of 3/10, n/30 was offered, FOB shipping point.
29	Received payment from Smith, less discount.
30	Received payment from Jarvis Company, less return.

Learning Objective 8
Appendix 5B

1. Gross Profit $212,800

P5-47B Preparing a multi-step income statement and journalizing closing entries

Taylor Department Store uses a periodic inventory system. The adjusted trial balance of Taylor Department Store at December 31, 2018, follows:

TAYLOR DEPARTMENT STORE
Adjusted Trial Balance
December 31, 2018

	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 7,900	
Accounts Receivable	85,300	
Merchandise Inventory (beginning)	37,600	
Office Supplies	300	
Furniture	83,000	
Accumulated Depreciation—Furniture		$ 18,500
Accounts Payable		28,500
Salaries Payable		2,900
Unearned Revenue		14,500
Notes Payable, long-term		32,000
Common Stock		20,000
Retained Earnings		45,400
Dividends	89,000	
Sales Revenue		380,800
Purchases	284,000	
Purchase Returns and Allowances		110,000
Purchase Discounts		7,000
Freight In	100	
Selling Expense	42,900	
Administrative Expense	26,300	
Interest Expense	3,200	
Total	$ 659,600	$ 659,600

Requirements

1. Prepare Taylor Department Store's multi-step income statement for the year ended December 31, 2018. Assume ending Merchandise Inventory is $36,700.
2. Journalize Taylor Department Store's closing entries.

CHAPTER 5

CRITICAL THINKING

> Using Excel

P5-48 Using Excel to prepare a multi-step income statement

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Cougar Mountain Sports has prepared an adjusted trial balance for the fiscal year ended June 30, 2018. Notes to the adjusted trial balance are located below the totals.

Use the blue shaded areas on the income statement worksheet for inputs.

Requirements:

1. Use Excel to prepare a multi-step income statement based on the adjusted trial balance.

- **a.** Use formulas to link the balances on the adjusted trial balance to the amounts on the income statement. Note that some balances are split between two different areas of the Income Statement. For example, the Rent Expense is divided into two categories—Selling and Administrative.
- **b.** Use a formula to add and subtract account amounts as indicated.
- **c.** Format the numbers in the dollar columns with a comma and no decimal places (e.g. 5,460). Use a dollar sign at the top of each column and at the total (e.g. $26,201). Make sure the decimal places align.
- **d.** Double-underline the total.

2. Compute the gross profit margin percentage. Format percentages to two decimal places (e.g. 22.74%).

> Continuing Problem Part 1

P5-49 Journalizing and posting purchase and sale transactions

This problem continues the Canyon Canoe Company situation from Chapter 4. At the beginning of the new year, Canyon Canoe Company decided to carry and sell T-shirts with its logo printed on them. Canyon Canoe Company uses the perpetual inventory system to account for the inventory. During January 2019, Canyon Canoe Company completed the following merchandising transactions:

Jan. 1	Purchased 10 T-shirts at $4 each and paid cash.
2	Sold 6 T-shirts for $10 each, total cost of $24. Received cash.
3	Purchased 50 T-shirts on account at $5 each. Terms 2/10, n/30.
7	Paid the supplier for the T-shirts purchased on January 3, less discount.
8	Realized 4 T-shirts from the January 1 order were printed wrong and returned them for a cash refund.
10	Sold 40 T-shirts on account for $10 each, total cost of $200. Terms 3/15, n/45.
12	Received payment for the T-shirts sold on account on January 10, less discount.
14	Purchased 100 T-shirts on account at $4 each. Terms 4/15, n/30.
18	Canyon Company called the supplier from the January 14 purchase and told them that some of the T-shirts were the wrong color. The supplier offered a $50 purchase allowance.
20	Paid the supplier for the T-shirts purchased on January 14, less the allowance and discount.
21	Sold 60 T-shirts on account for $10 each, total cost of $220. Terms 2/20, n/30.
23	Received a payment on account for the T-shirts sold on January 21, less discount.
25	Purchased 320 T-shirts on account at $5 each. Terms 2/10, n/30, FOB shipping point.
27	Paid freight associated with the January 25 purchase, $48.
29	Paid for the January 25 purchase, less discount.
30	Sold 275 T-shirts on account for $10 each, total cost of $1,300. Terms 2/10, n/30.
31	Received payment for the T-shirts sold on January 30, less discount.

Requirements

1. Open the following T-accounts in the ledger, using the post-closing balances from Chapter 4: Cash, Accounts Receivable, Merchandise Inventory, Estimated Returns Inventory, Office Supplies, Prepaid Rent, Land, Building, Accumulated Depreciation—Building, Canoes, Accumulated Depreciation—Canoes, Accounts Payable, Utilities Payable, Telephone Payable, Wages Payable, Refunds Payable, Interest Payable, Unearned Revenue, Notes Payable, Common Stock, Retained Earnings, Income Summary, Sales Revenue, Canoe Rental Revenue, Cost of Goods Sold, Rent Expense, Wages Expense, Utilities Expense, Telephone Expense, Supplies Expense, Depreciation Expense—Building, Depreciation Expense—Canoes, Interest Expense.
2. Journalize and post the transactions. Compute each account balance, and denote the balance as *Balance*. Omit explanations.

CHAPTER 5

> Continuing Problem Part 2

P5-50 Making adjusting and closing entries, preparing financial statements, and computing the gross profit percentage

This problem continues the Canyon Canoe Company situation and focuses on nonmerchandising transactions, adjusting and closing entries, and preparing financial statements. Canyon Canoe Company does not typically prepare adjusting and closing entries each month, but the company is surprised at how popular the shirts are and wishes to know the net income for January and would also like to understand how to prepare the closing entries for a merchandising company.

During January 2019, Canyon Canoe Company completed the following non-merchandising transactions:

Jan. 2	Collected $4,500 on account.
15	Paid the utilities and telephone bills from December.
15	Paid the wages accrued in December.
18	Rented canoes and received cash, $1,825
20	Received bills for utilities ($360) and telephone ($275) which will be paid later.
23	Paid various accounts payable, $1,800.
30	Paid employee, $750.

Requirements

1. Journalize and post the January transactions. Omit explanations. Use the ledger from the previous problem for posting.
2. Journalize and post the adjusting entries for the month of January. Omit explanations. Denote each adjustment as *Adj*. Compute each account balance, and denote the balance as *Balance*. In addition to the adjusting entries from the data from previous chapters, Canyon Canoe Company provides this data:
   a. A physical count of the inventory at the end of the month revealed the cost was $470.
   b. The company estimated sales returns will be $30 with a cost of $15.
   c. Office supplies used, $55.
   d. The Unearned Revenue has now been earned.
   e. Interest expense accrued on the notes payable, $50.
3. Prepare the month ended January 31, 2019, single step income statement of Canyon Canoe Company.
4. Journalize and post the closing entries. Omit explanations. Denote each closing amount as *Clo.* and each balance as *Balance*. After posting all closing entries, prove the equality of debits and credits in the ledger by preparing a post-closing trial balance.
5. Compute the gross profit percentage for January for Canyon Canoe Company.

CHAPTER 5

> Practice Set

P5-51 Journalizing purchase and sale transactions, making closing entries, preparing financial statements, and computing the gross profit percentage

This problem continues the Crystal Clear Cleaning practice set begun in Chapter 2 and continued through Chapters 3 and 4.

Crystal Clear Cleaning has decided that, in addition to providing cleaning services, it will sell cleaning products. Crystal Clear uses the perpetual inventory system. During December 2018, Crystal Clear completed the following transactions:

Dec. 2	Purchased 1,000 units of inventory for $4,000 on account from Sparkle Company on terms, 5/10, n/20.
5	Purchased 1,200 units of inventory from Borax on account with terms 4/10, n/30. The total invoice was for $6,000, which included a $300 freight charge.
7	Returned 300 units of inventory to Sparkle from the December 2 purchase (cost $1,200).
9	Paid Borax.
11	Sold 500 units of goods to Happy Maids for $5,500 on account with terms n/30. Crystal Clear's cost of the goods was $2,000.
12	Paid Sparkle.
15	Received 100 units with a retail price of $1,100 back from customer Happy Maids. The goods cost Crystal Clear $400.
21	Received payment from Happy Maids, settling the amount due in full.
28	Sold 500 units of goods to Bridget, Inc. on account for $6,500 (cost $2,022). Terms 1/15, n/30.
29	Paid cash for utilities of $550.
30	Paid cash for Sales Commission Expense of $214.
31	Received payment from Bridget, Inc., less discount.
31	Recorded the following adjusting entries: **a.** Physical count of inventory on December 31 showed 800 units of goods on hand, with a cost of $3,848. **b.** Depreciation, $150. **c.** Accrued salaries expense of $2,100. **d.** Estimated sales returns of $1,500, with cost of $540. **e.** Prepared all other adjustments necessary for December (Hint: You will need to review the adjustment information in Chapter 3 to determine the remaining adjustments). Assume the cleaning supplies left at December 31 are $50.

Requirements

1. Open the following T-accounts in the ledger: Cash, $51,650; Accounts Receivable, $4,000; Merchandise Inventory, $0; Estimated Returns Inventory, $0; Cleaning Supplies, $50; Prepaid Rent, $3,000; Prepaid Insurance, $4,400; Equipment, $5,400; Truck, $3,000; Accumulated Depreciation, $150; Accounts Payable, $1,245; Salaries Payable, $0; Interest Payable, $59; Refunds Payable, $0; Unearned Revenue, $14,375; Notes Payable, $36,000; Common Stock, $18,000; Retained Earnings,

$1,671; Income Summary, $0; Dividends, $0; Service Revenue, $0; Sales Revenue, $0; Cost of Goods Sold, $0; Salaries Expense, $0; Sales Commission Expense, $0; Utilities Expense, $0; Depreciation Expense, $0; Rent Expense, $0; Insurance Expense, $0; Interest Expense, $0.

2. Journalize and post the December transactions. Omit explanations. Compute each account balance, and denote the balance as *Balance*. Identify each accounts payable and accounts receivable with the vendor or customer name.
3. Journalize and post the adjusting entries. Omit explanations. Denote each adjusting amount as *Adj*. Compute each account balance, and denote the balance as *Balance*. After posting all adjusting entries, prove the equality of debits and credits in the ledger by preparing an adjusted trial balance.
4. Prepare the single step income statement and statement of retained earnings for the month ended December 31, 2018. Also prepare a classified balance sheet at December 31, 2018. Assume the note payable is long-term.
5. Compute the gross profit percentage for December for the company.

> Tying It All Together Case 5-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Macy's, Inc. 2015 annual report (https://www.sec.gov/Archives/edgar/data/794367/000079436716000221/m-0130201610k.htm).

Macy's, Inc. is a premier retailer in the United States, operating nearly 900 stores in 45 states. Macy's, Bloomingdale's, and Bloomingdale's Outlet are all brands that operate under Macy's, Inc. The company sells a wide range of merchandise including apparel and accessories, cosmetics, home furnishings, and other goods. Macy's, Inc. purchases it merchandise from many suppliers and also develops its own private label brands.

Requirements

1. Under the new revenue recognition rules, how will Macy's record and recognize sales revenue? Which financial statement is sales revenue reported on?
2. Macy's, Inc. reported cost of sales of $16,496 million for the year ending January 30, 2016. Which financial statement is cost of sales (also known as cost of goods sold) reported on? What does cost of sales represent? What type of account is cost of sales?
3. Assume Macy's, Inc. purchases $100,000 of inventory from one of its vendors. The terms of the purchase are FOB shipping point. Who pays the freight and how does the cost of the freight get recorded? Assume Macy's uses the perpetual inventory system.
4. On which financial statement will Macy's report its merchandise inventory?
5. Assume Macy's, Inc. prepares a multi-step income statement. What would the format of that income statement look like? What is one benefit of preparing a multi-step income statement for merchandising companies such as Macy's, Inc.?

CHAPTER 5

> Decision Case 5-1

Party-Time T-Shirts sells T-shirts for parties at the local college. The company completed the first year of operations, and the shareholders are generally pleased with operating results as shown by the following income statement:

PARTY-TIME T-SHIRTS Income Statement Year Ended December 31, 2017	
Net Sales Revenue	$ 350,000
Cost of Goods Sold	210,000
Gross Profit	140,000
Operating Expenses:	
Selling Expense	40,000
Administrative Expense	25,000
Net Income	$ 75,000

Bill Hildebrand, the controller, is considering how to expand the business. He proposes two ways to increase profits to $100,000 during 2018.

a. Hildebrand believes he should advertise more heavily. He believes additional advertising costing $20,000 will increase net sales by 30% and leave administrative expense unchanged. Assume that Cost of Goods Sold will remain at the same percentage of net sales as in 2017, so if net sales increase in 2018, Cost of Goods Sold will increase proportionately.

b. Hildebrand proposes selling higher-margin merchandise, such as party dresses, in addition to the existing product line. An importer can supply a minimum of 1,000 dresses for $40 each; Party-Time can mark these dresses up 100% and sell them for $80. Hildebrand realizes he will have to advertise the new merchandise, and this advertising will cost $5,000. Party-Time can expect to sell only 80% of these dresses during the coming year.

Help Hildebrand determine which plan to pursue. Prepare a multi-step income statement for 2018 to show the expected net income under each plan.

> Ethical Issue 5-1

Dobbs Wholesale Antiques makes all sales under terms of FOB shipping point. The company usually ships inventory to customers approximately one week after receiving the order. For orders received late in December, Kathy Dobbs, the owner, decides when to ship the goods. If profits are already at an acceptable level, Dobbs delays shipment until January. If profits for the current year are lagging behind expectations, Dobbs ships the goods during December.

Requirements

1. Under Dobbs's FOB policy, when should the company record a sale?
2. Do you approve or disapprove of Dobbs's manner of deciding when to ship goods to customers and record the sales revenue? If you approve, give your reason. If you disapprove, identify a better way to decide when to ship goods. (There is no accounting rule against Dobbs's practice.)

> Fraud Case 5-1

Rae Philippe was a warehouse manager for Atkins Oilfield Supply, a business that operated across eight Western states. She was an old pro and had known most of the other warehouse managers for many years. Around December each year, auditors would come to do a physical count of the inventory at each warehouse. Recently, Rae's brother started his own drilling company and persuaded Rae to "loan" him 80 joints of 5-inch drill pipe to use for his first well. He promised to have it back to Rae by December, but the well encountered problems and the pipe was still in the ground. Rae knew the auditors were on the way, so she called her friend Andy, who ran another Atkins warehouse. "Send me over 80 joints of 5-inch pipe tomorrow, and I'll get them back to you ASAP," said Rae. When the auditors came, all the pipe on the books was accounted for, and they filed a "no-exception" report.

Requirements

1. Is there anything the company or the auditors could do in the future to detect this kind of fraudulent practice?
2. How would this kind of action affect the financial performance of the company?

> Financial Statement Case 5-1

This case uses both the income statement (consolidated statements of operations) and the balance sheet (consolidated statements of financial position) of **Target Corporation**. Visit http://www.pearsonhighered.com/Horngren to view a link to the Target Corporation Fiscal 2015 Annual Report, for the fiscal year ending on January 30, 2016.

Requirements

1. What was the value of the company's inventory at January 30, 2016, and January 31, 2015?
2. Review Note 12 (specifically Inventories) in the Notes to Consolidated Financial Statements. What does Target include in the cost of inventory?
3. What was the amount of Target's cost of goods sold (cost of sales) for the year ending January 30, 2016, and the year ending January 31, 2015?
4. What income statement format does Target use? Explain.
5. Compute Target's gross profit percentage for the year ending January 30, 2016, and the year ending January 31, 2015. Did the gross profit percentage improve, worsen, or hold steady? Assuming the industry average for gross profit percentage is 35%, how does Target compare in the industry?

> Quick Check Answers

1. d **2.** a **3.** c **4.** c **5.** b **6.** a **7.** a **8.** d **9.** a **10A.** d **11B.** d

Chapter 5
Merchandising Operations

Review Questions

1. A merchandiser is a business that sells merchandise, or goods, to customers. The merchandise that these types of businesses sell is called merchandise inventory.

2. Merchandisers are often identified as either wholesalers or retailers. A wholesaler is a merchandiser that buys goods from a manufacturer and then sells them to retailers. A retailer buys merchandise either from a manufacturer or a wholesaler and then sells those goods to customers.

3. The operating cycle of a merchandiser is as follows: It begins when the company purchases inventory from a vendor, the company then sells the inventory to a customer, and finally, the company collects cash from customers.

4. Cost of Goods Sold is the cost of merchandise that has been sold to the customer. It is shown on the income statement as an expense.

5. Gross profit is calculated as net Sales Revenue minus Cost of Goods Sold and it represents the mark-up on the merchandise inventory. It is the extra amount the company receives from the customer over what the company paid to the vendor.

6. The two types of inventory accounting systems are the periodic inventory system and the perpetual inventory system. The periodic inventory system requires businesses to obtain a physical count of inventory to determine the quantities on hand. It is normally used for relatively inexpensive goods. The perpetual inventory system keeps a running computerized record of merchandise inventory, including inventory units and dollars amounts.

7. An invoice is the seller's request for payment from the buyer. It is also called a bill.

8. The Merchandise Inventory account is debited when recording the purchase of inventory using the perpetual inventory system.

9. The credit terms "2/10, n/EOM" means that the purchaser can deduct 2% from the total bill excluding freight if the company pays within 10 days of the invoice date. Otherwise the full amount is due by the end of the month.

10. A purchase return is when businesses allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable. Purchase allowances are granted to the purchaser as an incentive to *keep* goods that are not "as ordered." Together, purchase returns and allowances decrease the buyer's cost of the inventory.

11. FOB shipping point means the buyer takes ownership (title) to the goods after the goods leave the seller's place of business(shipping point). In this case, the buyer (owner of the goods while in transit) also pays the freight. FOB destination means the buyer takes ownership (title) to the goods at the delivery destination point. In this case, the seller (owner of the goods while in transit) usually pays the freight.

12. The net cost of inventory is calculated by taking the purchase cost of inventory less purchase returns and allowances less purchase discounts plus freight in.

13. The two journal entries involved when recording the sale of inventory when using the perpetual inventory system are first the debit to Cash or Accounts Receivable and credit to Sales Revenue. The second entry debits Cost of Goods Sold and credits Merchandise Inventory.

14. Under the new revenue recognition standard, the sale of inventory is recorded at the net amount, or the sales price less any applicable discount. Sales returns and allowances are also estimated and recorded.

15. Under the new revenue recognition standard, companies must estimate the amount of returns that the company will have. The first journal entry would debit Sales Revenue and credit Refunds Payable. The second journal entry would debit Estimated Returns Inventory and credit Cost of Goods Sold.

16. There is not a return of merchandise when a sales allowance is granted. The journal entry would debit Refunds Payable and credit Cash or Accounts Receivable.

17. Freight out expense is one in which the seller pays freight charges to ship goods to customers. Freight out is a delivery expense to the seller.

18. Inventory shrinkage is the loss of inventory that occurs because of theft, damage, and errors. The adjusting entry for shrinkage would be a debit to Cost of Goods Sold and credit to Merchandise Inventory.

19. The four-step closing process for a merchandising company are:
Step 1: Make the revenue accounts equal zero via the Income Summary account.
Step 2: Make expense accounts equal zero via the Income Summary account.
Step 3: Make the Income Summary account equal zero via the Retained Earnings account.
Step 4: Make the Dividends account equal zero via the Retained Earnings Account.

20. The single-step income statement is the income statement format that groups all revenues together and all expenses together without calculating other subtotals.

21. A multi-step income statement lists several important subtotals. In addition to net income (the bottom line), it also reports subtotals for gross profit and income from operations.

22. Merchandise inventory is shown as a current asset on the Balance Sheet.

23. The gross profit percentage measures the profitability of each sales dollar above the cost of goods sold. The gross profit percentage is computed as follows: Gross Profit / Net Sales Revenue

24A. Companies that have contracts involving multiple performance obligations must allocate the transaction price to the different performance obligations. The company should only recognize revenue when, or as, it satisfies each performance obligation.

25B. The Purchases account is debited when recording the purchase of inventory when using the periodic inventory system.

26B. The Purchase Returns and Allowances account is credited when recording purchase returns or purchase allowances when using the periodic inventory system.

27B. The Freight In account is debited when recording the payment of freight when using the periodic inventory system.

28B. When recording sales of merchandise inventory using the periodic system you will debit Cash or Accounts Receivable and credit Sales Revenue.

29B. An adjusting entry is not needed for inventory shrinkage when using the periodic system. The merchandise inventory account will reflect it when the physical count is taken and the ending merchandise inventory is recorded in the merchandise inventory account.

30B. The two main differences in the closing entries are in the first two steps. With Step 1 in the periodic method, you not only close out Sales Revenue and Sales Discounts Forfeited but also Purchase Returns and Allowances and Purchase Discounts. In addition, the ending Merchandise Inventory and Estimated Returns Inventory accounts are recorded as a debit. In Step 2 you close out the beginning merchandise inventory, Purchases, and Freight In accounts.

31B. The Cost of Goods Sold account is calculated by adding Beginning Merchandise Inventory plus Net Cost of Purchases less Ending Merchandise Inventory. Net Cost of Purchases is calculated by taking Purchases less Purchase Returns and Allowances less Purchase Discounts plus Freight In.

Short Exercises

S5-1

a. Periodic
b. Perpetual
c. Perpetual
d. Both
e. Perpetual

S5-2
Requirement 1

Date	Accounts and Explanation	Debit	Credit
May 8	Merchandise Inventory	113,300	
	Accounts Payable		113,300
12	Accounts Payable	11,250	
	Merchandise Inventory		11,250
15	Accounts Payable ($113,300 − $11,250)	102,050	
	Cash ($102,050 − $2,041)		100,009
	Merchandise Inventory ($102,050 × 0.02)		2,041

Requirement 2
The inventory cost for Toys and More is $100,009 ($113,300 − $11,250 − $2,041).

S5-3
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Feb. 2	Merchandise Inventory	23,800	
	Accounts Payable		23,800
4	Merchandise Inventory	50	
	Cash		50
9	Accounts Payable	5,200	
	Merchandise Inventory		5,200
14	Accounts Payable ($23,800 − $5,200)	18,600	
	Cash ($18,600 – $372)		18,228
	Merchandise Inventory ($18,600 × 0.02)		372

Requirement 2
The inventory cost for Burlington is $18,278 ($23,800 + $50 – $5,200 – $372)

S5-4

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	20,000	
	Sales Revenue		20,000
	Cost of Goods Sold	10,000	
	Merchandise Inventory		10,000
3	Accounts Receivable	60,140	
	Sales Revenue ($62,000 – ($62,000 × 0.03))		60,140
	Cost of Goods Sold	31,000	
	Merchandise Inventory		31,000
5	Refunds Payable	4,500	
	Cash		4,500
	Merchandise Inventory	2,250	
	Estimated Returns Inventory		2,250
10	Cash	60,140	
	Accounts Receivable		60,140

S5-5

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	1,600	
	Refunds Payable ($80,000 × 0.02)		1,600
31	Estimated Returns Inventory	960	
	Cost of Goods Sold ($48,000 × 0.02)		960

S5-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 10	Merchandise Inventory (3,500 × $17)	59,500	
	Accounts Payable		59,500
13	Accounts Payable (100 × $17)	1,700	
	Merchandise Inventory		1,700

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 10	Accounts Receivable	59,500	
	Sales Revenue (3,500 × $17)		59,500
	Cost of Goods Sold	35,700	
	Merchandise Inventory		35,700
13	Refunds Payable	1,700	
	Accounts Receivable		1,700
	Merchandise Inventory	1,020	
	Estimated Returns Inventory		1,020

S5-7
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Nov. 4	Merchandise Inventory	12,000	
	Accounts Payable		12,000
5	Merchandise Inventory	30	
	Cash		30
13	Accounts Payable	12,000	
	Merchandise Inventory ($12,000 × 0.03)		360
	Cash ($12,000 – $360)		11,640

S5-7, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Nov. 4	Accounts Receivable	11,640	
	Sales Revenue ($12,000 – ($12,000 × 0.03))		11,640
	Cost of Goods Sold	4,800	
	Merchandise Inventory		4,800
13	Cash	11,640	
	Accounts Receivable		11,640

S5-8

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold ($69,000 − $67,600)	1,400	
	Merchandise Inventory		1,400

S5-9
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	636,500	
	Interest Revenue	14,000	
	Income Summary		650,500
31	Income Summary	411,000	
	Cost of Goods Sold		372,000
	Rent Expense		26,000
	Depreciation Expense—Building		13,000
31	Income Summary	239,500	
	Retained Earnings		239,500
31	Retained Earnings	58,000	
	Dividends		58,000

Requirement 2
Ending Balance in Retained Earnings is $264,600 ($83,100 + $239,500 – $58,000)

S5-10

CAMILIA COMMUNICATIONS Income Statement Year Ended July 31, 2018		
Net Sales Revenue		$ 29,200
Cost of Goods Sold		18,700
Gross Profit		10,500
Operating Expenses:		
Selling Expenses	$ 1,400	
Administrative Expenses	3,300	
Total Operating Expenses		4,700
Operating Income		5,800
Other Income and (Expenses):		
Interest Expense	(65)	
Total Other Income and (Expenses)		(65)
Net Income		$ 5,735

S5-11
Requirement 1

CAMILIA COMMUNICATIONS Statement of Retained Earnings Year Ended July 31, 2018	
Retained Earnings, August 1, 2017	$ 0
Net income for the year	5,735
	5,735
Dividends	(0)
Retained Earnings, July 31, 2018	$ 5,735

Requirement 2

CAMILIA COMMUNICATIONS Balance Sheet July 31, 2018		
Assets		
Current Assets:		
Cash	$ 2,900	
Accounts Receivable	3,200	
Merchandise Inventory	1,100	
Total Current Assets		$ 7,200
Property, Plant, and Equipment:		
Equipment, Net	9,500	
Total Property, Plant, and Equipment		9,500
Total Assets		$ 16,700
Liabilities		
Current Liabilities:		
Accounts Payable	$ 4,300	
Accrued Liabilities	1,800	
Total Current Liabilities		$ 6,100
Long-term Liabilities:		
Notes Payable		500
Total Liabilities		6,600
Stockholders' Equity		
Common Stock		4,365
Retained Earnings		5,735
Total Stockholders' Equity		10,100
Total Liabilities and Stockholders' Equity		$ 16,700

S5-12

Net Sales Revenue	$ 134,700
Cost of Goods Sold	114,000
Gross Profit	$ 20,700

Gross profit percentage = $20,700 / $134,700 = 15.4%

S5A-13

Date	Accounts and Explanation	Debit	Credit
Apr. 1	Cash	150	
	Sales Revenue ($150 − $20)		130
	Unearned Revenue		20
1	Cost of Goods Sold	90	
	Merchandise Inventory		90
May 15	Cash ($30 − $20)	10	
	Unearned Revenue	20	
	Sales Revenue		30
15	Cost of Goods Sold	18	
	Merchandise Inventory		18

S5B-14
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Apr. 10	Purchases	175,000	
	Accounts Payable		175,000
12	Accounts Payable	15,200	
	Purchase Returns and Allowances		15,200
19	Accounts Payable ($175,000 – $15,200)	159,800	
	Cash ($159,800 − $1,598)		158,202
	Purchase Discounts ($159,800 × 0.01)		1,598

Requirement 2
The amount of net purchases = $158,202 ($175,000 − $15,200 − $1,598)

S5B-15

Date	Accounts and Explanation	Debit	Credit
Dec. 3	Accounts Receivable	40,643	
	Sales Revenue ($41,900 – ($41,900 × 0.03))		40,643
17	Cash	40,643	
	Accounts Receivable		40,643

S5B-16
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	257,800	
	Purchase Returns and Allowances	20,700	
	Purchase Discounts	2,900	
	Merchandise Inventory (ending)	102,100	
	Income Summary		383,500
31	Income Summary	319,400	
	Purchases		185,200
	Merchandise Inventory (beginning)		119,000
	Rent Expense		8,600
	Depreciation Expense—Building		4,700
	Interest Expense		1,900
31	Income Summary	64,100	
	Retained Earnings		64,100
31	Retained Earnings	26,500	
	Dividends		26,500

Requirement 2
D & T Printing Supplies ending retained earnings balance = $68,000 ($30,400 + $64,100 – $26,500)

S5B-17

Beginning Merchandise Inventory		$ 5,000
Purchases	$ 93,000	
Less: Purchase Returns and Allowances	6,600	
Purchase Discounts	0	
Net Purchases	86,400	
Plus: Freight In	1,200	
Net Cost of Purchases		87,600
Cost of Goods Available for Sale		92,600
Less: Ending Inventory		17,200
Cost of Goods Sold		$ 75,400

Exercises

E5-18

1.	h
2.	d
3.	i
4.	a
5.	b
6.	g
7.	e
8.	f
9.	c

E5-19
Requirements 1, 2, and 3

Date	Accounts and Explanation	Debit	Credit
Sep. 23	Merchandise Inventory	929.60	
	Accounts Payable		929.60
28	Accounts Payable	152.48	
	Merchandise Inventory		152.48
Oct. 1	Accounts Payable ($929.60 − $152.48)	777.12	
	Cash ($777.12 − $7.77)		769.35
	Merchandise Inventory ($777.12 × 0.01)		7.77

E5-20

Date	Accounts and Explanation	Debit	Credit
Jun. 20	Merchandise Inventory	5,100	
	Accounts Payable		5,100
20	Merchandise Inventory	400	
	Cash		400
Jul. 4	Accounts Payable	600	
	Merchandise Inventory		600
14	Accounts Payable ($5,100 − $600)	4,500	
	Cash		4,500
16	Merchandise Inventory	3,500	
	Accounts Payable		3,500
18	Accounts Payable	300	
	Merchandise Inventory		300
24	Accounts Payable ($3,500 − $300)	3,200	
	Cash ($3,200 − $64)		3,136
	Merchandise Inventory ($3,200 × 0.02)		64

E5-21

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Accounts Receivable	16,000	
	Sales Revenue		16,000
	Cost of Goods Sold	8,000	
	Merchandise Inventory		8,000
8	Refunds Payable	300	
	Accounts Receivable		300
	Merchandise Inventory	150	
	Estimated Returns Inventory		150
13	Cash	15,700	
	Accounts Receivable ($16,000 − $300)		15,700
20	Accounts Receivable	4,851	
	Sales Revenue ($4,900 – ($4,900 × 0.01))		4,851
	Cost of Goods Sold	2,450	
	Merchandise Inventory		2,450
20	Delivery Expense	70	
	Cash		70
29	Cash	4,851	
	Accounts Receivable		4,851

E5-22

Date	Accounts and Explanation	Debit	Credit
Feb. 3	Merchandise Inventory	3,300	
	Accounts Payable		3,300
7	Accounts Payable	900	
	Merchandise Inventory		900
9	Merchandise Inventory	400	
	Cash		400
10	Accounts Receivable	4,606	
	Sales Revenue ($4,700 – ($4,700 × 0.02))		4,606
	Cost of Goods Sold	2,350	
	Merchandise Inventory		2,350
12	Accounts Payable ($3,300 – $900)	2,400	
	Cash ($2,400 – $72)		2,328
	Merchandise Inventory ($2,400 × 0.03)		72
28	Cash	4,700	
	Sales Discounts Forfeited ($4,700 × 0.02)		94
	Accounts Receivable		4,606

E5-23
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Sales Revenue	235,700	
	Income Summary		235,700
31	Income Summary	151,950	
	Cost of Goods Sold		107,550
	Selling Expense		27,400
	Administrative Expense		14,200
	Interest Expense		2,800
31	Income Summary	83,750	
	Retained Earnings		83,750
31	Retained Earnings	41,500	
	Dividends		41,500

Requirement 2

Income Summary

Clos. 2	151,950	235,700	Clos. 1
		83,750	Bal.
Clos. 3	83,750		
		0	Bal.

Retained Earnings

		4,950	Adj. Bal.
Clos. 4	41,500	83,750	Clos. 3
		47,200	Bal.

Dividends

Adj. Bal.	41,500		
		41,500	Clos. 4
Bal.	0		

Requirement 3

Net Income = \$235,700 – \$151,950 = \$83,750

E5-24

QUALITY OFFICE SYSTEMS
Income Statement
Year Ended March 31, 2018

Revenues:		
Net Sales Revenue		$ 235,700
Expenses:		
Cost of Goods Sold	$ 107,550	
Selling Expense	27,400	
Administrative Expense	14,200	
Interest Expense	2,800	
Total Expenses		151,950
Net Income		$ 83,750

E5-25

QUALITY OFFICE SYSTEMS
Income Statement
Year Ended March 31, 2018

Net Sales Revenue		$ 235,700
Cost of Goods Sold		107,550
Gross Profit		128,150
Operating Expenses:		
Selling Expenses	$ 27,400	
Administrative Expenses	14,200	
Total Operating Expenses		41,600
Operating Income		86,550
Other Income and (Expenses):		
Interest Expense	(2,800)	
Total Other Income and (Expenses)		(2,800)
Net Income		$ 83,750

E5-26
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Cost of Goods Sold ($5,200 − $4,900)	300	
	Merchandise Inventory		300

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Sales Revenue	1,000	
	Refunds Payable		1,000
30	Estimated Returns Inventory	400	
	Cost of Goods Sold		400

E5-27

Net Sales Revenue	$ 66,000,000
Less: Cost of Goods Sold	39,600,000
Gross Profit	$ 26,400,000

Gross profit percentage = $26,400,000 / $66,000,000 = 40%

E5A-28

Date	Accounts and Explanation	Debit	Credit
Mar. 1	Cash	3,000	
	Sales Revenue ($3,000 − $150)		2,850
	Unearned Revenue		150
1	Cost of Goods Sold	1,800	
	Merchandise Inventory		1,800
3	Accounts Receivable	5,880	
	Sales Revenue ($6,000 – ($6,000 × 0.02))		5,880
3	Cost of Goods Sold	3,600	
	Merchandise Inventory		3,600
10	Cash	5,880	
	Accounts Receivable		5,880
Apr. 15	Cash ($200 − $150)	50	
	Unearned Revenue	150	
	Sales Revenue		200
15	Cost of Goods Sold	120	
	Merchandise Inventory		120

E5B-29

Date	Accounts and Explanation	Debit	Credit
Sept. 4	Purchases	6,900	
	Accounts Payable		6,900
4	Freight-In	480	
	Cash		480
10	Accounts Payable	300	
	Purchase Returns and Allowances		300
17	Accounts Payable ($6,900 – $300)	6,600	
	Cash ($6,600 – $198)		6,402
	Purchase Discounts ($6,600 × 0.03)		198
20	Purchases	3,900	
	Accounts Payable		3,900
22	Accounts Payable	400	
	Purchase Returns and Allowances		400
29	Accounts Payable ($3,900 – $400)	3,500	
	Cash ($3,500 – $35)		3,465
	Purchase Discounts ($3,500 × 0.01)		35

E5B-30

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Accounts Receivable	6,435	
	Sales Revenue ($6,500 – ($6,500 × 0.01))		6,435
8	Cash	6,435	
	Accounts Receivable		6,435
15	Accounts Receivable	3,100	
	Sales Revenue		3,100
15	Delivery Expense	90	
	Cash		90
20	Refunds Payable	500	
	Accounts Receivable		500
24	Cash	2,600	
	Accounts Receivable ($3,100 – $500)		2,600

E5B-31

Date	Accounts and Explanation	Debit	Credit
Nov. 2	Purchases	3,400	
	Accounts Payable		3,400
6	Accounts Payable	800	
	Purchase Returns and Allowances		800
8	Freight-In	100	
	Cash		100
10	Accounts Receivable	5,917	
	Sales Revenue ($6,100 – ($6,100 × 0.03))		5,917
11	Accounts Payable ($3,400 – $800)	2,600	
	Cash ($2,600 – $52)		2,548
	Purchase Discounts ($2,600 × 0.02)		52
22	Cash	5,917	
	Accounts Receivable		5,917

E5B-32
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	315,800	
	Interest Revenue	3,400	
	Purchase Returns and Allowances	94,600	
	Purchase Discounts	9,000	
	Merchandise Inventory (ending)	54,300	
	Income Summary		477,100
31	Income Summary	379,500	
	Purchases		274,500
	Merchandise Inventory (beginning)		44,500
	Selling Expense		38,600
	Administrative Expense		21,900
31	Income Summary	97,600	
	Retained Earnings		97,600
31	Retained Earnings	60,600	
	Dividends		60,600

Requirement 2

Income Summary

Clos. 2	379,500	477,100	Clos. 1
		97,600	Bal.
Clos. 3	97,600		
		0	Bal.

Retained Earnings

		34,100	Adj. Bal.
Clos. 4	60,600	97,600	Clos. 3
		71,100	Bal.

Dividends

Adj. Bal.	60,600		
		60,600	Clos. 4
Bal.	0		

Requirement 3

Net Income = $477,100 – $379,500 = $97,600

E5B-33
Requirement a

Beginning Merchandise Inventory		$ 16,000
Purchases	$ 81,000	
Less: Purchase Returns and Allowances	6,600	
Purchase Discounts	3,000	
Net Purchases	71,400	
Plus: Freight In	6,000	
Net Cost of Purchases		77,400
Cost of Goods Available for Sale		93,400
Less: Ending Inventory		21,500
Cost of Goods Sold		$ 71,900

Requirement b

Net Sales Revenue	$ 138,000
Less: Cost of Goods Sold	71,900
Gross Profit	$ 66,100

Problems (Group A)

P5-34A

Date	Accounts and Explanation	Debit	Credit
Sep. 3	Merchandise Inventory	5,500	
	Accounts Payable—Sharpner Wholesalers		5,500
4	Merchandise Inventory	85	
	Cash		85
4	Merchandise Inventory	1,600	
	Cash		1,600
6	Accounts Payable—Sharpner Wholesalers	1,300	
	Merchandise Inventory		1,300
8	Accounts Receivable—Herman Company	5,586	
	Sales Revenue ($5,700 – ($5,700 × 0.02))		5,586
	Cost of Goods Sold	2,565	
	Merchandise Inventory		2,565
9	Merchandise Inventory	6,000	
	Accounts Payable—Tucker Wholesalers		6,000
10	Accounts Payable—Sharpner Wholesalers ($5,500 – $1,300)	4,200	
	Cash ($4,200 – $84)		4,116
	Merchandise Inventory ($4,200 × 0.02)		84
12	Cash	5,586	
	Accounts Receivable—Herman Company		5,586
13	Accounts Payable—Tucker Wholesalers	500	
	Merchandise Inventory		500
15	Accounts Receivable—Jerome Company	2,800	
	Sales Revenue		2,800
	Cost of Goods Sold	1,200	
	Merchandise Inventory		1,200
22	Accounts Payable—Tucker Wholesalers ($6,000 – $500)	5,500	
	Cash		5,500

P5-34A, cont.

Sep. 23	Refunds Payable	200	
	Accounts Receivable—Jerome Company		200
	Merchandise Inventory	80	
	Estimated Returns Inventory		80
25	Accounts Receivable—Small ($1,746 + $40)	1,786	
	Sales Revenue ($1,800 – ($1,800 × 0.03))		1,746
	Cash		40
	Cost of Goods Sold	738	
	Merchandise Inventory		738
29	Cash	1,786	
	Accounts Receivable—Small		1,786
30	Cash	2,600	
	Accounts Receivable—Jerome Company ($2,800 – $200)		2,600

P5-35A

Date	Accounts and Explanation	Debit	Credit
Nov. 4	Merchandise Inventory	5,000	
	Accounts Payable—Vera Company		5,000
6	Merchandise Inventory	100	
	Cash		100
8	Accounts Payable—Vera Company	2,500	
	Merchandise Inventory ($5,000 × 0.50)		2,500
10	Cash	1,100	
	Sales Revenue		1,100
	Cost of Goods Sold	400	
	Merchandise Inventory		400
11	Accounts Receivable—Geary Corporation	10,878	
	Sales Revenue ($11,100 – ($11,100 × 0.02))		10,878
	Cost of Goods Sold	6,105	
	Merchandise Inventory		6,105
12	Delivery Expense	20	
	Cash		20
13	Accounts Receivable—Caldwell Company	9,500	
	Sales Revenue		9,500
	Cost of Goods Sold	5,225	
	Merchandise Inventory		5,225
14	Accounts Payable—Vera Company ($5,000 – $2,500)	2,500	
	Cash ($2,500 – $75)		2,425
	Merchandise Inventory ($2,500 × 0.03)		75
17	Refunds Payable	500	
	Accounts Receivable—Caldwell Company		500
	Merchandise Inventory	275	
	Estimated Returns Inventory		275

P5-35A, cont.

Nov. 18	Merchandise Inventory	3,600	
	Accounts Payable—Rainman Corporation		3,600
20	Cash	10,878	
	Accounts Receivable—Geary Corporation		10,878
26	Accounts Payable—Rainman Corporation	3,600	
	Cash ($3,600 – $72)		3,528
	Merchandise Inventory ($3,600 × 0.02)		72
28	Cash	9,000	
	Accounts Receivable—Caldwell Company ($9,500 – $500)		9,000
29	Merchandise Inventory	12,300	
	Cash		12,300
	Merchandise Inventory	170	
	Cash		170

P5-36A
Requirement 1

RACHAEL REY'S MUSIC COMPANY
Income Statement
Year Ended June 30, 2018

Net Sales Revenue		$ 184,000
Cost of Goods Sold		85,500
Gross Profit		98,500
Operating Expenses:		
Selling Expenses	$ 18,600	
Administrative Expenses	12,000	
Total Operating Expenses		30,600
Operating Income		67,900
Other Income and (Expenses):		
Interest Expense	(1,900)	
Total Other Income and (Expenses)		(1,900)
Net Income		$ 66,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Sales Revenue	184,000	
	Income Summary		184,000
30	Income Summary	118,000	
	Cost of Goods Sold		85,500
	Selling Expense		18,600
	Administrative Expense		12,000
	Interest Expense		1,900
30	Income Summary	66,000	
	Retained Earnings		66,000
30	Retained Earnings	40,000	
	Dividends		40,000

P5-36A, cont.
Requirement 3

RACHAEL REY'S MUSIC COMPANY Post-Closing Trial Balance June 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,000	
Accounts Receivable	38,400	
Merchandise Inventory	18,100	
Office Supplies	300	
Furniture	39,900	
Accumulated Depreciation—Furniture		$ 8,200
Accounts Payable		13,800
Salaries Payable		850
Unearned Revenue		7,500
Notes Payable, long-term		17,000
Common Stock		6,000
Retained Earnings		47,350
Total	**$ 100,700**	**$ 100,700**

P5-37A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Interest Receivable	200	
	Interest Revenue		200
31	Salaries Expense (Selling)	2,300	
	Salaries Payable		2,300
31	Depreciation Expense—Equipment (Administrative)	1,300	
	Accumulated Depreciation—Equipment		1,300
31	Interest Expense	1,500	
	Interest Payable		1,500
31	Cost of Goods Sold	300	
	Merchandise Inventory ($45,500 – $45,200)		300
31	Sales Revenue	6,000	
	Refunds Payable		6,000
31	Estimated Returns Inventory	1,200	
	Cost of Goods Sold		1,200

P5-37A, cont.
Requirement 2

TRUDEL ELECTRONICS COMPANY
Adjusted Trial Balance
March 31, 2018

Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,000	
Accounts Receivable	38,800	
Interest Receivable	200	
Merchandise Inventory	45,200	
Estimated Returns Inventory	1,200	
Office Supplies	6,500	
Equipment	130,000	
Accumulated Depreciation—Equipment		$ 38,100
Accounts Payable		17,400
Refunds Payable		6,000
Salaries Payable		2,300
Interest Payable		1,500
Unearned Revenue		13,200
Notes Payable, long-term		48,000
Common Stock		60,000
Retained Earnings		100
Dividends	20,000	
Sales Revenue		276,500
Interest Revenue		200
Cost of Goods Sold	159,700	
Salaries Expense (Selling)	22,300	
Rent Expense (Selling)	15,800	
Salaries Expense (Administrative)	5,700	
Utilities Expense (Administrative)	11,100	
Depreciation Expense—Equipment (Administrative)	1,300	
Interest Expense	1,500	
Total	**$ 463,300**	**$ 463,300**

P5-37A, cont.
Requirement 3

TRUDEL ELECTRONICS COMPANY Income Statement Year Ended March 31, 2018		
Net Sales Revenue		$ 276,500
Cost of Goods Sold		159,700
Gross Profit		116,800
Operating Expenses:		
Selling Expenses:		
Salaries Expense	$ 22,300	
Rent Expense	15,800	
Total Selling Expenses	38,100	
Administrative Expenses:		
Salaries Expense	5,700	
Utilities Expense	11,100	
Depreciation Expense—Equipment	1,300	
Total Administrative Expenses	18,100	
Total Operating Expenses		56,200
Operating Income		60,600
Other Income and (Expenses):		
Interest Revenue	200	
Interest Expense	(1,500)	
Total Other Income and (Expenses)		(1,300)
Net Income		$ 59,300

P5-38A
Requirement 1

FARM QUALITY STEAK COMPANY Income Statement Quarter Ended April 30, 2018		
Revenues:		
Net Sales Revenue	$ 298,000	
Interest Revenue	400	
Total Revenues		$ 298,400
Expenses:		
Cost of Goods Sold	154,960	
Rent Expense (Selling)	15,100	
Utilities Expense (Selling)	10,000	
Salaries Expense (Selling)	6,000	
Delivery Expense (Selling)	3,800	
Depreciation Expense—Equipment (Administrative)	1,320	
Utilities Expense (Administrative)	4,600	
Rent Expense (Administrative)	7,100	
Salaries Expense (Administrative)	2,000	
Interest Expense	2,100	
Total Expenses		206,980
Net Income		$ 91,420

P5-38A, cont.
Requirement 2

FARM QUALITY STEAK COMPANY Income Statement Quarter Ended April 30, 2018		
Net Sales Revenue		$ 298,000
Cost of Goods Sold		154,960
Gross Profit		143,040
Operating Expenses:		
Selling Expenses:		
Rent Expense	$ 15,100	
Utilities Expense	10,000	
Salaries Expense	6,000	
Delivery Expense	3,800	
Total Selling Expenses	34,900	
Administrative Expenses:		
Depreciation Expense—Equipment	1,320	
Utilities Expense	4,600	
Rent Expense	7,100	
Salaries Expense	2,000	
Total Administrative Expenses	15,020	
Total Operating Expenses		49,920
Operating Income		93,120
Other Income and (Expenses):		
Interest Revenue	400	
Interest Expense	(2,100)	
Total Other Income and (Expenses)		(1,700)
Net Income		$ 91,420

Requirement 3

Farm Quality Steak Company did not achieve the goal of a gross profit percentage of 50%, it was only 48%

Net Sales Revenue	$ 298,000
Less: Cost of Goods Sold	154,960
Gross Profit	$ 143,040

Gross profit percentage = $143,040 / $298,000 = 48%

P5B-39A

Date	Accounts and Explanation	Debit	Credit
Mar. 3	Purchases	5,500	
	Accounts Payable—Sidecki Wholesalers		5,500
4	Freight-In	70	
	Cash		70
4	Purchases	1,100	
	Cash		1,100
6	Accounts Payable—Sidecki Wholesalers	900	
	Purchase Returns and Allowances		900
8	Accounts Receivable—Herrick Company	3,366	
	Sales Revenue ($3,400 – ($3,400 × 0.01))		3,366
9	Purchases	5,600	
	Accounts Payable—Tex Wholesalers		5,600
10	Accounts Payable—Sidecki Wholesalers ($5,500 – $900)	4,600	
	Cash ($4,600 – $92)		4,508
	Purchase Discounts ($4,600 × 0.02)		92
12	Cash	3,366	
	Accounts Receivable—Herrick Company		3,366
13	Accounts Payable—Tex Wholesalers	500	
	Purchase Returns and Allowances		500
15	Accounts Receivable—Jesper Company	1,700	
	Sales Revenue		1,700
22	Accounts Payable—Tex Wholesalers ($5,600 – $500)	5,100	
	Cash		5,100
23	Refunds Payable	300	
	Accounts Receivable—Jesper Company		300
25	Accounts Receivable—Salter	990	
	Sales Revenue ($1,000 – ($1,000 × 0.01))		990

P5B-39A, cont.

29	Cash	990	
	Accounts Receivable—Salter		990
30	Cash	1,400	
	Accounts Receivable—Jesper Company ($1,700 – $300)		1,400

P5B-40A
Requirement 1

TRITON DEPARTMENT STORE
Income Statement
Year Ended December 31, 2018

Net Sales Revenue			$ 374,000
Cost of Goods Sold:			
Beginning Merchandise Inventory		$ 37,800	
Purchases	$ 295,000		
Less: Purchase Returns & Allowances	109,000		
Purchase Discounts	6,400		
Net Purchases	179,600		
Plus: Freight In	300		
Net Cost of Purchases		179,900	
Cost of Goods Available for Sale		217,700	
Less: Ending Merchandise Inventory		36,300	
Cost of Goods Sold			181,400
Gross Profit			192,600
Operating Expenses:			
Selling Expenses		41,700	
Administrative Expenses		26,600	
Total Operating Expenses			68,300
Operating Income			124,300
Other Income and (Expenses):			
Interest Expense		(3,700)	
Total Other Income and (Expenses)			(3,700)
Net Income			$ 120,600

P5B-40A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	374,000	
	Purchase Returns and Allowances	109,000	
	Purchase Discounts	6,400	
	Merchandise Inventory (ending)	36,300	
	Income Summary		525,700
31	Income Summary	405,100	
	Purchases		295,000
	Freight In		300
	Merchandise Inventory (beginning)		37,800
	Selling Expense		41,700
	Administrative Expense		26,600
	Interest Expense		3,700
31	Income Summary	120,600	
	Retained Earnings		120,600
31	Retained Earnings	88,600	
	Dividends		88,600

P5-41B

Date	Accounts and Explanation	Debit	Credit
Feb. 3	Merchandise Inventory	5,200	
	Accounts Payable—Silton Wholesalers		5,200
4	Merchandise Inventory	70	
	Cash		70
4	Merchandise Inventory	1,500	
	Cash		1,500
6	Accounts Payable—Silton Wholesalers	900	
	Merchandise Inventory		900
8	Accounts Receivable—Herenda Company	5,432	
	Sales Revenue ($5,600 – ($5,600 × 0.03))		5,432
	Cost of Goods Sold	2,352	
	Merchandise Inventory		2,352
9	Merchandise Inventory	7,000	
	Accounts Payable—Teddy Wholesalers		7,000
10	Accounts Payable—Silton Wholesalers ($5,200 – $900)	4,300	
	Cash ($4,300 – $86)		4,214
	Merchandise Inventory ($4,300 × 0.02)		86
12	Cash	5,432	
	Accounts Receivable—Herenda Company		5,432
13	Accounts Payable—Teddy Wholesalers	500	
	Merchandise Inventory		500
15	Accounts Receivable—Jordon Company	3,400	
	Sales Revenue		3,400
	Cost of Goods Sold	1,496	
	Merchandise Inventory		1,496
22	Accounts Payable—Teddy Wholesalers ($7,000 – $500)	6,500	
	Cash		6,500

P5-41B, cont.

Feb. 23	Refunds Payable	1,000	
	Accounts Receivable—Jordon Company		1,000
	Merchandise Inventory	440	
	Estimated Returns Inventory		440
25	Accounts Receivable—Smith ($1,666 + $70)	1,736	
	Sales Revenue ($1,700 – ($1,700 × 0.02))		1,666
	Cash		70
	Cost of Goods Sold	663	
	Merchandise Inventory		663
27	Cash	1,736	
	Accounts Receivable—Smith		1,736
28	Cash	2,400	
	Accounts Receivable—Jordon Company ($3,400 – $1,000)		2,400

P5-42B

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Merchandise Inventory	7,000	
	Accounts Payable—Vanderbilt Company		7,000
6	Merchandise Inventory	100	
	Cash		100
8	Accounts Payable—Vanderbilt Company	3,500	
	Merchandise Inventory ($7,000 × 0.50)		3,500
10	Cash	1,600	
	Sales Revenue		1,600
	Cost of Goods Sold	640	
	Merchandise Inventory		640
11	Accounts Receivable—Graceland Corporation	10,692	
	Sales Revenue ($10,800 – ($10,800 × 0.01))		10,692
	Cost of Goods Sold	5,400	
	Merchandise Inventory		5,400
12	Delivery Expense	60	
	Cash		60
13	Accounts Receivable—Cabbell Company	9,500	
	Sales Revenue		9,500
	Cost of Goods Sold	5,225	
	Merchandise Inventory		5,225
14	Accounts Payable—Vanderbilt Company ($7,000 – $3,500)	3,500	
	Cash ($3,500 – $35)		3,465
	Merchandise Inventory ($3,500 × 0.01)		35
17	Refunds Payable	600	
	Accounts Receivable—Cabbell Company		600
	Merchandise Inventory	300	
	Estimated Returns Inventory		300

P5-42B, cont.

Jan. 18	Merchandise Inventory	4,600	
	Accounts Payable—Roberts Corporation		4,600
20	Cash	10,692	
	Accounts Receivable—Graceland Corporation		10,692
26	Accounts Payable—Roberts Corporation	4,600	
	Cash ($4,600 – $138)		4,462
	Merchandise Inventory ($4,600 × 0.03)		138
28	Cash	8,900	
	Accounts Receivable—Cabbell Company ($9,500 – $600)		8,900
29	Merchandise Inventory	11,600	
	Cash		11,600
	Merchandise Inventory	240	
	Cash		240

P5-43B
Requirement 1

ROCKIN ROBBIN DANCE COMPANY Income Statement Year Ended April 30, 2018		
Net Sales Revenue		$ 178,500
Cost of Goods Sold		83,700
Gross Profit		94,800
Operating Expenses:		
Selling Expenses	$ 19,000	
Administrative Expenses	16,000	
Total Operating Expenses		35,000
Operating Income		59,800
Other Income and (Expenses):		
Interest Expense	(1,900)	
Total Other Income and (Expenses)		(1,900)
Net Income		$ 57,900

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Apr. 30	Sales Revenue	178,500	
	Income Summary		178,500
30	Income Summary	120,600	
	Cost of Goods Sold		83,700
	Selling Expense		19,000
	Administrative Expense		16,000
	Interest Expense		1,900
30	Income Summary	57,900	
	Retained Earnings		57,900
30	Retained Earnings	40,000	
	Dividends		40,000

P5-43B, cont.
Requirement 3

ROCKIN ROBBIN DANCE COMPANY Post-Closing Trial Balance April 30, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,400	
Accounts Receivable	38,000	
Merchandise Inventory	17,800	
Office Supplies	850	
Furniture	39,900	
Accumulated Depreciation—Furniture		$ 8,300
Accounts Payable		14,100
Salaries Payable		1,000
Unearned Revenue		6,500
Notes Payable, long-term		12,000
Common Stock		5,000
Retained Earnings		54,050
Total	**$ 100,950**	**$ 100,950**

P5-44B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Interest Receivable	550	
	Interest Revenue		550
31	Salaries Expense (Selling)	2,800	
	Salaries Payable		2,800
31	Depreciation Expense—Equipment (Administrative)	1,295	
	Accumulated Depreciation—Equipment		1,295
31	Interest Expense	1,500	
	Interest Payable		1,500
31	Cost of Goods Sold	400	
	Merchandise Inventory ($45,700 – $45,300)		400
31	Sales Revenue	6,200	
	Refunds Payable		6,200
	Estimated Returns Inventory	2,480	
	Cost of Goods Sold		2,480

P5-44B, cont.
Requirement 2

TUTTLE ELECTRONICS COMPANY Adjusted Trial Balance October 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 4,200	
Accounts Receivable	33,800	
Interest Receivable	550	
Merchandise Inventory	45,300	
Estimated Returns Inventory	2,480	
Office Supplies	5,700	
Equipment	129,500	
Accumulated Depreciation—Equipment		$ 38,495
Accounts Payable		15,600
Refunds Payable		6,200
Salaries Payable		2,800
Interest Payable		1,500
Unearned Revenue		13,400
Notes Payable, long-term		53,000
Common Stock		48,000
Retained Earnings		6,700
Dividends	27,000	
Sales Revenue		294,100
Interest Revenue		550
Cost of Goods Sold	169,520	
Salaries Expense (Selling)	28,800	
Rent Expense (Selling)	15,400	
Salaries Expense (Administrative)	4,800	
Utilities Expense (Administrative)	10,500	
Depreciation Expense—Equipment (Administrative)	1,295	
Interest Expense	1,500	
Total	**$ 480,345**	**$ 480,345**

P5-44B, cont.
Requirement 3

TUTTLE ELECTRONICS COMPANY		
Income Statement		
Year Ended October 31, 2018		
Net Sales Revenue		$ 294,100
Cost of Goods Sold		169,520
Gross Profit		124,580
Operating Expenses:		
Selling Expenses:		
Salaries Expense	$ 28,800	
Rent Expense	15,400	
Total Selling Expenses	44,200	
Administrative Expenses:		
Salaries Expense	4,800	
Utilities Expense	10,500	
Depreciation Expense—Equipment	1,295	
Total Administrative Expenses	16,595	
Total Operating Expenses		60,795
Operating Income		63,785
Other Income and (Expenses):		
Interest Revenue	550	
Interest Expense	(1,500)	
Total Other Income and (Expenses)		(950)
Net Income		$ 62,835

P5-45B
Requirement 1

GRADE A BEEF COMPANY Income Statement Quarter Ended September 30, 2018		
Revenues:		
Net Sales Revenue	$ 294,000	
Interest Revenue	900	
Total Revenues		$ 294,900
Expenses:		
Cost of Goods Sold	161,700	
Rent Expense (Selling)	16,700	
Utilities Expense (Selling)	10,900	
Salaries Expense (Selling)	5,000	
Delivery Expense (Selling)	3,100	
Depreciation Expense—Equipment (Administrative)	1,310	
Utilities Expense (Administrative)	4,500	
Salaries Expense (Administrative)	2,500	
Rent Expense (Administrative)	7,400	
Interest Expense	2,300	
Total Expenses		215,410
Net Income		$ 79,490

P5-45B, cont.
Requirement 2

GRADE A BEEF COMPANY Income Statement Quarter Ended September 30, 2018		
Net Sales Revenue		$ 294,000
Cost of Goods Sold		161,700
Gross Profit		132,300
Operating Expenses:		
Selling Expenses:		
Rent Expense	$ 16,700	
Utilities Expense	10,900	
Salaries Expense	5,000	
Delivery Expense	3,100	
Total Selling Expenses	35,700	
Administrative Expenses:		
Depreciation Expense—Equipment	1,310	
Utilities Expense	4,500	
Salaries Expense	2,500	
Rent Expense	7,400	
Total Administrative Expenses	15,710	
Total Operating Expenses		51,410
Operating Income		80,890
Other Income and (Expenses):		
Interest Revenue	900	
Interest Expense	(2,300)	
Total Other Income and (Expenses)		(1,400)
Net Income		$ 79,490

Requirement 3

Grade A Beef Company did not achieve the goal of a gross profit percentage of 50%; it was only 45%.

Net Sales Revenue	$ 294,000
Less: Cost of Goods Sold	161,700
Gross Profit	$ 132,300

Gross profit percentage = $132,300/ $294,000 = 45%

P5B-46B

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Purchases	5,500	
	Accounts Payable—Sherry Wholesalers		5,500
4	Freight-In	42	
	Cash		42
4	Purchases	1,100	
	Cash		1,100
6	Accounts Payable—Sherry Wholesalers	200	
	Purchase Returns and Allowances		200
8	Accounts Receivable—Henrich Company	4,312	
	Sales Revenue ($4,400 – ($4,400 × 0.02))		4,312
9	Purchases	4,600	
	Accounts Payable—Tex Wholesalers		4,600
10	Accounts Payable—Sherry Wholesalers ($5,500 – $200)	5,300	
	Cash ($5,300 – $159)		5,141
	Purchase Discounts ($5,300 × 0.03)		159
12	Cash	4,312	
	Accounts Receivable—Henrich Company		4,312
13	Accounts Payable—Tex Wholesalers	300	
	Purchase Returns and Allowances		300
15	Accounts Receivable—Jarvis Company	1,500	
	Sales Revenue		1,500
22	Accounts Payable—Tex Wholesalers ($4,600 – $300)	4,300	
	Cash		4,300
23	Refunds Payable	100	
	Accounts Receivable—Jarvis Company		100
25	Accounts Receivable—Smith	679	
	Sales Revenue ($700 – ($700 × 0.03))		679

P5B-46B, cont.

Jun. 29	Cash	679	
	Accounts Receivable—Smith		679
30	Cash	1,400	
	Accounts Receivable—Jarvis Company ($1,500 – $100)		1,400

P5B-47B
Requirement 1

TAYLOR DEPARTMENT STORE Income Statement Year Ended December 31, 2018			
Net Sales Revenue			$ 380,800
Cost of Goods Sold:			
Beginning Merchandise Inventory		$ 37,600	
Purchases	$ 284,000		
Less: Purchase Returns & Allowances	110,000		
Purchase Discounts	7,000		
Net Purchases	167,000		
Plus: Freight In	100		
Net Cost of Purchases		167,100	
Cost of Goods Available for Sale		204,700	
Less: Ending Merchandise Inventory		36,700	
Cost of Goods Sold			168,000
Gross Profit			212,800
Operating Expenses:			
Selling Expenses		42,900	
Administrative Expenses		26,300	
Total Operating Expenses			69,200
Operating Income			143,600
Other Income and (Expenses):			
Interest Expense		(3,200)	
Total Other Income and (Expenses)			(3,200)
Net Income			$ 140,400

P5B-47B, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	380,800	
	Purchase Returns and Allowances	110,000	
	Purchase Discounts	7,000	
	Merchandise Inventory (ending)	36,700	
	Income Summary		534,500
31	Income Summary	394,100	
	Purchases		284,000
	Freight In		100
	Merchandise Inventory (beginning)		37,600
	Selling Expense		42,900
	Administrative Expense		26,300
	Interest Expense		3,200
31	Income Summary	140,400	
	Retained Earnings		140,400
31	Retained Earnings	89,000	
	Dividends		89,000

Using Excel

P5-48

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is located in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem – Part 1

P5-49
Requirement 2

Date	Accounts	Debit	Credit
Jan. 1	Merchandise Inventory (10 × $4)	40	
	Cash		40
2	Cash (6 × $10)	60	
	Sales Revenue		60
	Cost of Goods Sold	24	
	Merchandise Inventory		24
3	Merchandise Inventory (50 × $5.00)	250	
	Accounts Payable		250
7	Accounts Payable	250	
	Cash ($250 − $5)		245
	Merchandise Inventory ($250 × 0.02)		5
8	Cash (4 × $4)	16	
	Merchandise Inventory		16
10	Accounts Receivable	388	
	Sales Revenue		388
	40 × $10 = $400; $400 – ($400 × 0.03)		
	Cost of Goods Sold	200	
	Merchandise Inventory		200
12	Cash	388	
	Accounts Receivable		388
14	Merchandise Inventory (100 × $4)	400	
	Accounts Payable		400

P5-49, cont.
Requirement 2, cont.

Date	Accounts	Debit	Credit
18	Accounts Payable	50	
	Merchandise Inventory		50
20	Accounts Payable ($400 - $50)	350	
	Cash ($350 - $14)		336
	Merchandise Inventory ($350 × 0.04)		14
21	Accounts Receivable	588	
	Sales Revenue		588
	60 × $10 = $600; $600 – ($600 × 0.02)		
	Cost of Goods Sold	220	
	Merchandise Inventory		220
23	Cash	588	
	Accounts Receivable		588
25	Merchandise Inventory (320 × $5)	1,600	
	Accounts Payable		1,600
27	Merchandise Inventory	48	
	Cash		48
29	Accounts Payable	1,600	
	Cash ($1,600 – $32)		1,568
	Merchandise Inventory ($1,600 × 0.02)		32
30	Accounts Receivable	2,695	
	Sales Revenue		2,695
	275 × $10 = $2,750; $2,750 – ($2,750 × 0.02)		
	Cost of Goods Sold	1,300	
	Merchandise Inventory		1,300
31	Cash	2,695	
	Accounts Receivable		2,695

P5-49, cont.
Requirements 1 and 2

Cash

Balance	12,125		
Jan. 2	60	40	Jan. 1
8	16	245	7
12	388	336	20
23	588	48	27
31	2,695	1,568	29
Balance	13,635		

Accounts Receivable

Balance	7,600		
Jan. 10	388	388	Jan. 12
21	588	588	23
30	2,695	2,695	31
Balance	7,600		

Merchandise Inventory

Balance	0		
Jan. 1	40	24	Jan. 2
3	250	5	7
14	400	16	8
25	1,600	200	10
27	48	50	18
		14	20
		220	21
		32	29
		1,300	30
Balance	477		

Estimated Returns Inventory

Office Supplies

Balance	165		

Prepaid Rent

Balance	2,000		

Land

Balance	85,000		

Building

Balance	35,000		

Accumulated Depreciation—Building

		500	Balance

P5-49, cont.
Requirements 1 and 2, cont.

Canoes

Balance	12,000		

Accumulated Depreciation—Canoes

		350	Balance

Accounts Payable

		3,050	Balance
Jan. 7	250	250	Jan. 3
18	50	400	14
20	350	1,600	25
29	1,600		
		3,050	Balance

Utilities Payable

		295	Balance

Telephone Payable

		325	Balance

Wages Payable

		1,250	Balance

Refunds Payable

Interest Payable

		50	Balance

Unearned Revenue

		350	Balance

Notes Payable

		7,200	Balance

Common Stock

		136,000	Balance

Retained Earnings

		4,520	Balance

Income Summary

P5-49, cont.
Requirements 1 and 2, cont.

Sales Revenue

		0	Balance
		60	Jan. 2
		388	10
		588	21
		2,695	30
		3,731	Balance

Canoe Rental Revenue

		0	Balance

Cost of Goods Sold

Balance	0		
Jan. 2	24		
10	200		
21	220		
30	1,300		
Balance	1,744		

Rent Expense

Balance	0	

Wages Expense

Balance	0	

Utilities Expense

Balance	0	

Telephone Expense

Balance	0	

Supplies Expense

Balance	0	

Depreciation Expense—Building

Balance	0	

Depreciation Expense—Canoes

Balance	0	

Interest Expense

Balance	0	

Continuing Problem – Part 2

P5-50
Requirements 1 and 2

Date	Accounts	Debit	Credit
Jan. 2	Cash	4,500	
	Accounts Receivable		4,500
15	Utilities Payable	295	
	Telephone Payable	325	
	Cash		620
15	Wages Payable	1,250	
	Cash		1,250
18	Cash	1,825	
	Canoe Rental Revenue		1,825
20	Utilities Expense	360	
	Utilities Payable		360
	Telephone Expense	275	
	Telephone Payable		275
23	Accounts Payable	1,800	
	Cash		1,800
30	Wages Expense	750	
	Cash		750

P5-50, cont.
Requirements 1 and 2

Date	Accounts	Debit	Credit
	Adjusting Entries		
Jan. 31			
(a)	Cost of Goods Sold ($487 – $480)	7	
	Merchandise Inventory		7
(b)	Sales Revenue	30	
	Refunds Payable		30
	Estimated Returns Inventory	15	
	Cost of Goods Sold		15
(c)	Supplies Expense	55	
	Office Supplies		55
(d)	Unearned Revenue	350	
	Canoe Rental Revenue		350
(e)	Interest Expense	50	
	Interest Payable		50
(f)	Rent Expense	1,000	
	Prepaid Rent		1,000
(g)	Depreciation Expense—Building	500	
	Accumulated Depreciation—Building		500
(h)	Depreciation Expense—Canoes	250	
	Accumulated Depreciation—Canoes		250

P5-50, cont.
Requirement 4, cont.

Date	Accounts	Debit	Credit
	Closing Entries		
Jan. 31	Sales Revenue	3,701	
	Canoe Rental Revenue	2,175	
	Income Summary		5,876
31	Income Summary	4,976	
	Cost of Goods Sold		1,736
	Rent Expense		1,000
	Wages Expense		750
	Utilities Expense		360
	Telephone Expense		275
	Supplies Expense		55
	Depreciation Expense—Building		500
	Depreciation Expense—Canoes		250
	Interest Expense		50
31	Income Summary	900	
	Retained Earnings		900

P5-50, cont., Requirements 1, 2, and 4

Cash

Balance	12,125		
Jan. 2	60	40	Jan. 1
8	16	245	7
12	388	336	20
23	588	48	27
31	2,695	1,568	29
Balance	13,635		
Jan. 2	4,500	620	Jan. 15
18	1,825	1,250	15
		1,800	23
		750	30
Balance	15,540		

Accounts Receivable

Balance	7,600		
Jan. 10	388	388	Jan. 12
21	588	588	23
30	2,695	2,695	31
Balance	7,600		
		4,500	Jan. 2
Balance	3,100		

Merchandise Inventory

Balance	0		
Jan. 1	40	24	Jan. 2
3	250	5	7
14	400	16	8
25	1,600	200	10
27	48	50	18
		14	20
		220	21
		32	29
		1,300	30
Balance	477		
		7	Adj.
Balance	470		

Estimated Returns Inventory

Adj.	15		
Balance	15		

Office Supplies

Balance	165		
		55	Adj.
Balance	110		

Prepaid Rent

Balance	2,000		
		1,000	Adj.
Balance	1,000		

P5-50, cont., Requirements 1, 2, and 4, cont.

Land

Balance	85,000		

Building

Balance	35,000		

Accumulated Depreciation—Building

		500	Balance
		500	Adj.
		1,000	Balance

Canoes

Balance	12,000		

Accumulated Depreciation—Canoes

		350	Balance
		250	Adj.
		600	Balance

Accounts Payable

		3,050	Balance
Jan. 7	250	250	Jan. 3
18	50	400	14
20	350	1,600	25
29	1,600		
		3,050	Balance
Jan. 23	1,800		
		1,250	Balance

Utilities Payable

		295	Balance
Jan. 15	295	360	Jan. 20
		360	Balance

Telephone Payable

		325	Balance
Jan. 15	325	275	Jan. 20
		275	Balance

Wages Payable

		1,250	Balance
Jan. 15	1,250		
		0	Balance

Refunds Payable

		30	Adj.
		30	Balance

P5-50, cont., Requirements 1, 2, and 4, cont.

Interest Payable

		50	Balance
		50	Adj.
		100	Balance

Unearned Revenue

		350	Balance
Adj.	350		
		0	Balance

Notes Payable

		7,200	Balance

Common Stock

		136,000	Balance

Retained Earnings

		4,520	Balance
		900	Clo.
		5,420	Balance

Income Summary

Clo.	4,976	5,876	Clo.
		900	Balance
Clo.	900		
		0	Balance

Sales Revenue

		0	Balance
		60	Jan. 2
		388	10
		588	21
		2,695	30
		3,731	Balance
Adj.	30		
		3,701	Balance
Clo.	3,701		
		0	Balance

Canoe Rental Revenue

		0	Balance
		1,825	Jan. 18
		1,825	Balance
		350	Adj.
		2,175	Balance
Clo.	2,175		
		0	Balance

P5-50, cont., Requirements 1, 2, and 4, cont.

Cost of Goods Sold

Balance	0		
Jan. 2	24		
10	200		
21	220		
30	1,300		
Balance	1,744		
Adj.	7	15	Adj.
Balance	1,736		
		1,736	Clo.
Balance	0		

Rent Expense

Balance	0		
Adj.	1,000		
Balance	1,000		
		1,000	Clo.
Balance	0		

Wages Expense

Balance	0		
Jan. 30	750		
Balance	750		
		750	Clo.
Balance	0		

Utilities Expense

Balance	0		
Jan. 20	360		
Balance	360		
		360	Clo.
Balance	0		

Telephone Expense

Balance	0		
Jan. 20	275		
Balance	275		
		275	Clo.
Balance	0		

Supplies Expense

Balance	0		
Adj.	55		
Balance	55		
		55	Clo.
Balance	0		

P5-50, cont., Requirements 1, 2, and 4, cont.

Depreciation Expense—Building

Balance	0		
Adj.	500		
Balance	500		
		500	Clo.
Balance	0		

Depreciation Expense—Canoes

Balance	0		
Adj.	250		
Balance	250		
		250	
Balance	0		

Interest Expense

Balance	0		
Adj.	50		
Balance	50		
		50	Clo.
Balance	0		

P5-50, cont.
Requirement 3

CANYON CANOE COMPANY		
Income Statement		
Month Ended January 31, 2019		
Revenues:		
Net Sales Revenue	$ 3,701	
Canoe Rental Revenue	2,175	
Total Revenues		$ 5,876
Expenses:		
Cost of Goods Sold	1,736	
Rent Expense	1,000	
Wages Expense	750	
Utilities Expense	360	
Telephone Expense	275	
Supplies Expense	55	
Depreciation Expense—Building	500	
Depreciation Expense—Canoes	250	
Interest Expense	50	
Total Expenses		4,976
Net Income		$ 900

P5-50, cont.
Requirement 4

CANYON CANOE COMPANY Post-Closing Trial Balance January 31, 2019		
Account Title	Balance	
	Debit	Credit
Cash	$ 15,540	
Accounts Receivable	3,100	
Merchandise Inventory	470	
Estimated Returns Inventory	15	
Office Supplies	110	
Prepaid Rent	1,000	
Land	85,000	
Building	35,000	
Accumulated Depreciation—Building		$ 1,000
Canoes	12,000	
Accumulated Depreciation—Canoes		600
Accounts Payable		1,250
Utilities Payable		360
Telephone Payable		275
Refunds Payable		30
Interest Payable		100
Notes Payable		7,200
Common Stock		136,000
Retained Earnings		5,420
Total	$ 152,235	$ 152,235

Requirement 5

Net Sales Revenue	$ 3,701
Less: Cost of Goods Sold	1,736
Gross Profit	$ 1,965

Gross profit percentage = $1,965 / $3,701 = 53.1%

Practice Set

P5-51
Requirements 2 and 3

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Merchandise Inventory	4,000	
	Accounts Payable—Sparkle Company		4,000
5	Merchandise Inventory	6,000	
	Accounts Payable—Borax		6,000
7	Accounts Payable—Sparkle Company	1,200	
	Merchandise Inventory		1,200
9	Accounts Payable—Borax	6,000	
	Cash ($6,000 − $228)		5,772
	Merchandise Inventory [($6,000 – $300) × 0.04]		228
11	Accounts Receivable—Happy Maids	5,500	
	Sales Revenue		5,500
	Cost of Goods Sold	2,000	
	Merchandise Inventory		2,000
12	Accounts Payable—Sparkle Company ($4,000 – $1,200)	2,800	
	Cash ($2,800 – $140)		2,660
	Merchandise Inventory ($2,800 × 0.05)		140
15	Refunds Payable	1,100	
	Accounts Receivable—Happy Maids		1,100
	Merchandise Inventory	400	
	Estimated Returns Inventory		400
21	Cash	4,400	
	Accounts Receivable—Happy Maids ($5,500 – $1,100)		4,400
28	Accounts Receivable—Bridget, Inc.	6,435	
	Sales Revenue ($6,500 – ($6,500 × 0.01))		6,435
	Cost of Goods Sold	2,022	
	Merchandise Inventory		2,022

P5-51
Requirements 2 and 3, cont.

Dec. 29	Utilities Expense	550	
	Cash		550
30	Sales Commission Expense	214	
	Cash		214
31	Cash	6,435	
	Accounts Receivable—Bridget, Inc.		6,435
	Adjusting Entries		
Dec. 31	Cost of Goods Sold	962	
	Merchandise Inventory ($4,810 − $3,848)		962
31	Depreciation Expense	150	
	Accumulated Depreciation		150
31	Salaries Expense	2,100	
	Salaries Payable		2,100
31	Sales Revenue	1,500	
	Refunds Payable		1,500
31	Estimated Returns Inventory	540	
	Cost of Goods Sold		540
31	Insurance Expense	400	
	Prepaid Insurance		400
31	Rent Expense	1,000	
	Prepaid Rent		1,000
31	Interest Expense ($36,000 × 0.06 × 1/12)	180	
	Interest Payable		180
31	Unearned Revenue	1,250	
	Service Revenue		1,250

P5-51, cont.
Requirements 1, 2 and 3, cont.

Cash

Balance	51,650		
Dec. 21	4,400	5,772	Dec. 9
Dec. 31	6,435	2,660	Dec. 12
		550	Dec. 29
		214	Dec. 30
Balance	53,289		

Accounts Receivable

Balance	4,000		
Dec. 11	5,500	1,100	Dec. 15
Dec. 28	6,435	4,400	Dec. 21
		6,435	Dec. 31
Balance	4,000		

Merchandise Inventory

Dec. 2	4,000	1,200	Dec. 7
Dec. 5	6,000	228	Dec. 9
Dec. 15	400	2,000	Dec. 11
		140	Dec. 12
		2,022	Dec. 28
Balance	4,810		
		962	Adj.
Balance	3,848		

Estimated Returns Inventory

Adj.	540	400	Dec. 15
Balance	140		

Cleaning Supplies

Balance	50		

Prepaid Rent

Balance	3,000		
		1,000	Adj.
Balance	2,000		

Prepaid Insurance

Balance	4,400		
		400	Adj.
Balance	4,000		

Equipment

Balance	5,400		

Truck

Balance	3,000		

Accounts Payable

		1,245	Balance
Dec. 7	1,200	4,000	Dec. 2
Dec. 9	6,000	6,000	Dec. 5
Dec. 12	2,800		
		1,245	Balance

Salaries Payable

		2,100	Adj.
		2,100	Balance

Interest Payable

		59	Balance
		180	Adj.
		239	Balance

Refunds Payable

Dec. 15	1,100	1,500	Adj.
		400	Balance

Unearned Revenue

		14,375	Balance
Adj.	1,250		
		13,125	Balance

Notes Payable

		36,000	Balance

Common Stock

		18,000	Balance

Retained Earnings

		1,671	Balance

Income Summary

Dividends

Service Revenue

		1,250	Adj.
		1,250	Balance

P5-51, cont.
Requirements 1, 2 and 3, cont.

Accumulated Depreciation

		150	Balance
		150	Adj.
		300	Balance

Sales Revenue

		5,500	Dec. 11
		6,435	Dec. 28
		11,935	Balance
Adj.	1,500		
		10,435	Balance

Cost of Goods Sold

Dec. 11	2,000		
Dec. 28	2,022		
Balance	4,022		
Adj.	962	540	Adj.
Balance	4,444		

Salaries Expense

Adj.	2,100		
Balance	2,100		

Sales Commission Expense

Dec. 30	214		
Balance	214		

Utilities Expense

Dec. 29	550		
Balance	550		

Depreciation Expense

Adj.	150		
Balance	150		

Rent Expense

Adj.	1,000		
Balance	1,000		

Insurance Expense

Adj.	400		
Balance	400		

Interest Expense

Adj.	180		
Balance	180		

P5-51, cont.
Requirement 3

CRYSTAL CLEAR CLEANING Adjusted Trial Balance December 31, 2018		
Account Title	**Balance**	
	Debit	Credit
Cash	$ 53,289	
Accounts Receivable	4,000	
Merchandise Inventory	3,848	
Estimated Returns Inventory	140	
Cleaning Supplies	50	
Prepaid Rent	2,000	
Prepaid Insurance	4,000	
Equipment	5,400	
Truck	3,000	
Accumulated Depreciation		$ 300
Accounts Payable		1,245
Salaries Payable		2,100
Interest Payable		239
Refunds Payable		400
Unearned Revenue		13,125
Notes Payable		36,000
Common Stock		18,000
Retained Earnings		1,671
Dividends	0	
Service Revenue		1,250
Sales Revenue		10,435
Cost of Goods Sold	4,444	
Salaries Expense	2,100	
Sales Commission Expense	214	
Utilities Expense	550	
Depreciation Expense	150	
Rent Expense	1,000	
Insurance Expense	400	
Interest Expense	180	
Total	**$ 84,765**	**$ 84,765**

P5-51, cont.
Requirement 4

CRYSTAL CLEAR CLEANING Income Statement Month Ended December 31, 2018		
Revenues:		
Net Sales Revenue	$ 10,435	
Service Revenue	1,250	
Total Revenues		$ 11,685
Expenses:		
Cost of Goods Sold	4,444	
Salaries Expense	2,100	
Sales Commission Expense	214	
Utilities Expense	550	
Depreciation Expense	150	
Rent Expense	1,000	
Insurance Expense	400	
Interest Expense	180	
Total Expenses		9,038
Net Income		$ 2,647

CRYSTAL CLEAR CLEANING Statement of Retained Earnings Month Ended December 31, 2018	
Retained Earnings, November 30, 2018	$ 1,671
Net income for the month	2,647
	4,318
Dividends	(0)
Retained Earnings, December 31, 2018	$ 4,318

P5-51
Requirement 4, cont.

CRYSTAL CLEAR CLEANING Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 53,289	
Accounts Receivable	4,000	
Merchandise Inventory	3,848	
Estimated Returns Inventory	140	
Cleaning Supplies	50	
Prepaid Rent	2,000	
Prepaid Insurance	4,000	
Total Current Assets		$ 67,327
Plant Assets:		
Equipment	5,400	
Truck	3,000	
Accumulated Depreciation	(300)	
Total Plant Assets		8,100
Total Assets		$ 75,427
Liabilities		
Current Liabilities:		
Accounts Payable	$ 1,245	
Salaries Payable	2,100	
Interest Payable	239	
Refunds Payable	400	
Unearned Revenue	13,125	
Total Current Liabilities		$ 17,109
Long-term Liabilities:		
Notes Payable		36,000
Total Liabilities		53,109
Stockholders' Equity		
Common Stock		18,000
Retained Earnings		4,318
Total Stockholders' Equity		22,318
Total Liabilities and Stockholders' Equity		$ 75,427

P5-51, cont.
Requirement 5

Gross profit percentage	=	Gross profit	/	Net sales revenue
	=	(\$10,435 – \$4,444)	/	\$10,435
	=	0.574 = 57.4%		

*from the Income Statement

Critical Thinking

Tying It All Together Case 5-1

Requirement 1
Under the new revenue recognition standard, Macy's, Inc. would record the sale of inventory at the net amount or the sales price less any applicable discount. Macy's, Inc. should also estimate sales returns. Macy's would record a journal entry to reduce Sales Revenue and increase Refunds Payable. They would also record an increase to Estimated Returns Inventory and reduce Cost of Goods Sold. Sales revenue would not be recorded until the performance obligation (delivery of inventory to the customer) has been satisfied. Sales revenue is reported on the income statement.

Requirement 2
Cost of goods sold is reported on the income statement as an expense account and represents the cost of inventory the company has sold to its customers.

Requirement 3
Under the terms FOB shipping point, the buyer (Macy's, Inc.) pays the shipping costs. The cost of the freight becomes part of the cost of merchandise inventory. Under the perpetual inventory system, Macy's will debit Merchandise Inventory and credit Cash for freight costs.

Requirement 4
Macy's, Inc. will report its merchandise inventory on its balance sheet as a current asset.

Requirement 5
A multi-step income statement includes several important subtotals. It starts by calculating gross profit or net sales less cost of goods sold. Next, the operating expenses are listed and are subtracted from gross profit to determine operating income. The next section includes other income and expenses. Lastly, the company will report income tax expense and determine net income. The benefit of preparing a multi-step income statement for merchandising companies is that there are several important subtotals such as gross profit and operating income.

Decision Case 5-1

Plan a:

PARTY-TIME T-SHIRTS
Expected Income Statement
Year Ended December 31, 2018

Net Sales Revenue	($350,000 × 1.3)		$ 455,000
Cost of Goods Sold	($210,000 × 1.3)		(273,000)
Gross Profit			182,000
Operating Expenses:			
Selling Expense	($40,000 + $20,000)	$ 60,000	
Administrative Expense		25,000	
Net Income			$ 97,000

Plan b:

PARTY-TIME T-SHIRTS
Expected Income Statement
Year Ended December 31, 2018

Net Sales Revenue	($350,000 + (800 dresses × $80))		$ 414,000
Cost of Goods Sold	($210,000 + (800 dresses × $40))		(242,000)
Gross Profit			172,000
Operating Expenses:			
Selling Expense	($40,000 + 5,000)	$ 45,000	
Administrative Expense		25,000	
Total Expenses			
			70,000
Net Income			$ 102,000

Hildebrand should select plan b because it generates more net income than plan a, and will meet the $100,000 profit goal.

Ethical Issue 5-1
Requirement 1

Under the FOB shipping point terms, the business should record a sale when it ships the goods.

Requirement 2

This is a difficult ethical issue because there is no single correct answer. There is no rule of accounting, law, or ethics to govern when a business should ship the goods. Therefore, students can legitimately approve of Dobbs' practice because she is free to ship the goods whenever she wishes and then to record the revenue.

Some students may disapprove of the practice because the owner is timing shipments to manipulate reported income. Students who hold this view may argue that Dobbs should time shipments near year end exactly as during the rest of the year.

It should be pointed out that:

a. Dobbs is not creating fictitious sales. The business is merely shifting sales from one period to another.

b. Companies have been caught advancing a future period's sales into the current period before actually shipping goods. (Dobbs is *not* doing this!) If the seller has not satisfied all the necessary conditions, it is *unethical* to record a sale. The courts punish this type of unethical conduct. Dobbs is definitely not guilty of this practice.

c. This is simply an effort to smooth income, but at the cost of potentially delaying the realization of revenue (getting the cash from sales) and possibly making the customer unhappy. In a global economy with many potential competitors, goods should be shipped as soon as possible.

Fraud Case 5-1
Requirement 1

Auditors should arrive unannounced, so that the local manager cannot make an arrangement like this in advance. The inventory should be controlled and observed (counted) at all warehouses simultaneously.

Requirement 2

Other customers would not want to purchase used parts or would want them at a discount. The profits of the company would be decreased. Ending inventory and total assets are overstated. If ending inventory is overstated, net income (and equity) are overstated.

Financial Case 5-1
Requirement 1

Target Inventory Value

January 30, 2016	$ 8,601 (in millions)
January 31, 2015	$ 8,282 (in millions)

Requirement 2

The cost of Target's inventory includes the amount it pays to its suppliers to acquire inventory, freight costs incurred in connection with the delivery of product to its distribution centers and stores, and import costs, reduced by vendor income and cash discounts. Inventory is reduced for estimated losses related to shrinkage and markdowns.

Requirement 3

Target Cost of Sales

January 30, 2016	$ 51,997 (in millions)
January 31, 2015	$ 51,278 (in millions)

Requirement 4

Target uses the multi-step income statement to some extent. It shows gross margin, earnings from continuing operations before interest expense and income taxes, earnings from continuing operations before incomes taxes, net earnings from continuing operations, and net earnings.

Requirement 5

	January 30, 2016(in millions)	January 31, 2015(in millions)
Sales	$ 73,785	$ 72,618
Cost of Sales	51,997	51,278
Gross Margin	21,788	21,340
Gross Profit %	29.5%	29.4%

The gross profit percentage has increased slightly from 2014 to 2015. As of January 30, 2016, it is significantly lower than the industry average of 35%.

Chapter 5 Appendix 5C
Merchandising Operations

Short Exercises

S5C-1

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Accounts Receivable	66,000	
	Sales Revenue		66,000
	Cost of Goods Sold	33,000	
	Merchandise Inventory		33,000
25	Cash	66,000	
	Accounts Receivable		66,000

S5C-2

Date	Accounts and Explanation	Debit	Credit
June 5	Accounts Receivable	20,000	
	Sales Revenue		20,000
	Cost of Goods Sold	10,000	
	Merchandise Inventory		10,000
12	Cash ($20,000 − $800)	19,200	
	Sales Discounts ($20,000 × 0.04)	800	
	Accounts Receivable		20,000

S5C-3
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 10	Merchandise Inventory (2,000 × $19)	38,000	
	Accounts Payable		38,000
22	Accounts Payable	38,000	
	Cash ($38,000 – $380)		37,620
	Merchandise Inventory ($38,000 × 0.01)		380

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 10	Accounts Receivable (2,000 × $19)	38,000	
	Sales Revenue		38,000
	Cost of Goods Sold	22,800	
	Merchandise Inventory		22,800
22	Cash ($38,000 − $380)	37,620	
	Sales Discounts ($38,000 × 0.01)	380	
	Accounts Receivable		38,000

Exercises

E5C-4

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Accounts Receivable	10,000	
	Sales Revenue		10,000
	Cost of Goods Sold	5,000	
	Merchandise Inventory		5,000
20	Cash	10,000	
	Accounts Receivable		10,000
20	Accounts Receivable	5,200	
	Sales Revenue		5,200
	Cost of Goods Sold	2,600	
	Merchandise Inventory		2,600
20	Delivery Expense	120	
	Cash		120
29	Cash ($5,200 − $52)	5,148	
	Sales Discounts ($5,200 × 0.01)	52	
	Accounts Receivable		5,200

E5C-5

Date	Accounts and Explanation	Debit	Credit
Feb. 3	Merchandise Inventory	2,800	
	Accounts Payable		2,800
7	Accounts Payable	700	
	Merchandise Inventory		700
9	Merchandise Inventory	400	
	Cash		400
10	Accounts Receivable	4,800	
	Sales Revenue		4,800
	Cost of Goods Sold	2,400	
	Merchandise Inventory		2,400
12	Accounts Payable ($2,800 – $700)	2,100	
	Cash ($2,100 – $63)		2,037
	Merchandise Inventory ($2,100 × 0.03)		63
28	Cash	4,800	
	Accounts Receivable		4,800

Problems (Group A)

P5C-6A

Date	Accounts and Explanation	Debit	Credit
Sep. 3	Merchandise Inventory	4,000	
	Accounts Payable—Sherry Wholesalers		4,000
4	Merchandise Inventory	75	
	Cash		75
4	Merchandise Inventory	1,900	
	Cash		1,900
6	Accounts Payable—Sherry Wholesalers	1,100	
	Merchandise Inventory		1,100
8	Accounts Receivable—Houston Company	5,500	
	Sales Revenue		5,500
	Cost of Goods Sold	2,365	
	Merchandise Inventory		2,365
9	Merchandise Inventory	12,000	
	Accounts Payable—Tarin Wholesalers		12,000
10	Accounts Payable—Sherry Wholesalers ($4,000 – $1,100)	2,900	
	Cash ($2,900 – $29)		2,871
	Merchandise Inventory ($2,900 × 0.01)		29
13	Accounts Payable—Tarin Wholesalers	200	
	Merchandise Inventory		200
15	Accounts Receivable—Java Company	3,300	
	Sales Revenue		3,300
	Cost of Goods Sold	1,320	
	Merchandise Inventory		1,320
22	Accounts Payable—Tarin Wholesalers ($12,000 – $200)	11,800	
	Cash		11,800

P5C-6A, cont.

Sep. 25	Accounts Receivable—Smecker	1,985	
	Sales Revenue		1,900
	Cash		85
	Cost of Goods Sold	722	
	Merchandise Inventory		722
28	Cash	5,500	
	Accounts Receivable—Houston Company		5,500
29	Cash ($1,985 – $19)	1,966	
	Sales Discounts ($1,900 × 0.01)	19	
	Accounts Receivable—Smecker		1,985
30	Cash	3,300	
	Accounts Receivable—Java Company		3,300

P5C-7A

Date	Accounts and Explanation	Debit	Credit
Nov. 4	Merchandise Inventory	8,000	
	Accounts Payable—Valera Company		8,000
6	Merchandise Inventory	160	
	Cash		160
8	Accounts Payable—Valera Company	4,000	
	Merchandise Inventory ($8,000 × 0.50)		4,000
10	Cash	1,700	
	Sales Revenue		1,700
	Cost of Goods Sold	680	
	Merchandise Inventory		680
11	Accounts Receivable—Garrison Corporation	10,300	
	Sales Revenue		10,300
	Cost of Goods Sold	5,150	
	Merchandise Inventory		5,150
12	Delivery Expense	30	
	Cash		30
13	Accounts Receivable—Cain Company	9,000	
	Sales Revenue		9,000
	Cost of Goods Sold	4,500	
	Merchandise Inventory		4,500
14	Accounts Payable—Valera Company ($8,000 – $4,000)	4,000	
	Cash ($4,000 – $40)		3,960
	Merchandise Inventory ($4,000 × 0.01)		40

P5C-7A, cont.

Nov. 18	Merchandise Inventory	3,700	
	Accounts Payable—Regan Corporation		3,700
20	Cash ($10,300 – $309)	9,991	
	Sales Discounts ($10,300 × 0.03)	309	
	Accounts Receivable—Garrison Corporation		10,300
26	Accounts Payable—Regan Corporation	3,700	
	Cash ($3,700 – $74)		3,626
	Merchandise Inventory ($3,700 × 0.02)		74
28	Cash	9,000	
	Accounts Receivable—Cain Company		9,000
29	Merchandise Inventory	12,000	
	Cash		12,000
	Merchandise Inventory	200	
	Cash		200

P5C-8B

Date	Accounts and Explanation	Debit	Credit
Mar. 3	Merchandise Inventory	3,500	
	Accounts Payable—Sidecki Wholesalers		3,500
4	Merchandise Inventory	75	
	Cash		75
4	Merchandise Inventory	2,200	
	Cash		2,200
6	Accounts Payable—Sidecki Wholesalers	800	
	Merchandise Inventory		800
8	Accounts Receivable—Harvey Company	5,700	
	Sales Revenue		5,700
	Cost of Goods Sold	2,508	
	Merchandise Inventory		2,508
9	Merchandise Inventory	6,000	
	Accounts Payable—Teaton Wholesalers		6,000
10	Accounts Payable—Sidecki Wholesalers ($3,500 – $800)	2,700	
	Cash ($2,700 – $54)		2,646
	Merchandise Inventory ($2,700 × 0.02)		54
13	Accounts Payable—Teaton Wholesalers	100	
	Merchandise Inventory		100
15	Accounts Receivable—Jackson Company	2,900	
	Sales Revenue		2,900
	Cost of Goods Sold	1,276	
	Merchandise Inventory		1,276
22	Accounts Payable—Teaton Wholesalers ($6,000 – $100)	5,900	
	Cash		5,900

P5C-8B, cont.

Mar. 25	Accounts Receivable—Secker	2,085	
	Sales Revenue		2,000
	Cash		85
	Cost of Goods Sold	880	
	Merchandise Inventory		880
28	Cash	5,700	
	Accounts Receivable—Harvey Company		5,700
29	Cash ($2,085 – $40)	2,045	
	Sales Discounts ($2,000 × 0.02)	40	
	Accounts Receivable—Secker		2,085
30	Cash	2,900	
	Accounts Receivable—Jackson Company		2,900

P5C-9B

Date	Accounts and Explanation	Debit	Credit
Jan. 4	Merchandise Inventory	5,000	
	Accounts Payable—Vanderbilt Company		5,000
6	Merchandise Inventory	150	
	Cash		150
8	Accounts Payable—Vanderbilt Company	2,500	
	Merchandise Inventory ($5,000 × 0.50)		2,500
10	Cash	1,100	
	Sales Revenue		1,100
	Cost of Goods Sold	440	
	Merchandise Inventory		440
11	Accounts Receivable—Gilmore Corporation	10,100	
	Sales Revenue		10,100
	Cost of Goods Sold	5,555	
	Merchandise Inventory		5,555
12	Delivery Expense	30	
	Cash		30
13	Accounts Receivable—Cadet Company	8,800	
	Sales Revenue		8,800
	Cost of Goods Sold	4,400	
	Merchandise Inventory		4,400
14	Accounts Payable—Vanderbilt Company ($5,000 – $2,500)	2,500	
	Cash ($2,500 – $25)		2,475
	Merchandise Inventory ($2,500 × 0.01)		25

P5C-9B, cont.

Jan. 18	Merchandise Inventory	4,600	
	Accounts Payable—Roberts Corporation		4,600
20	Cash ($10,100 – $303)	9,797	
	Sales Discounts ($10,100 × 0.03)	303	
	Accounts Receivable—Gilmore Corporation		10,100
26	Accounts Payable—Roberts Corporation	4,600	
	Cash ($4,600 – $46)		4,554
	Merchandise Inventory ($4,600 × 0.01)		46
28	Cash	8,800	
	Accounts Receivable—Cadet Company		8,800
29	Merchandise Inventory	12,000	
	Cash		12,000
	Merchandise Inventory	240	
	Cash		240

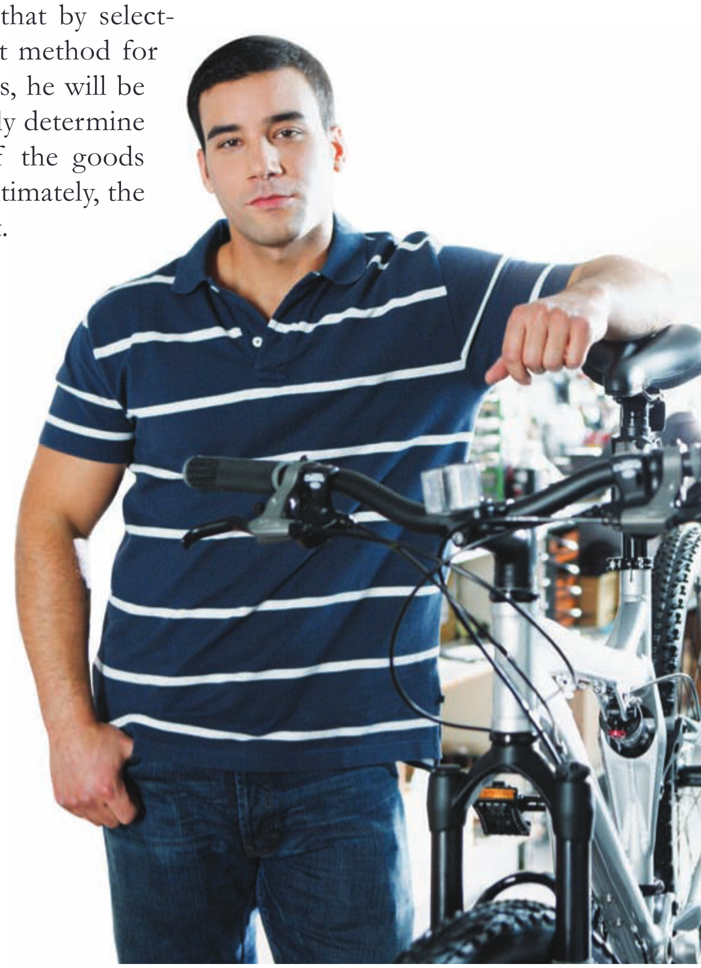
6 Merchandise Inventory

What Is the Cost of This Merchandise Inventory?

Jorell was excited about the most recent shipment of merchandise inventory that he received today. As the controller of a successful sporting goods store, he has decided to expand the merchandise inventory line by offering outdoor cooking items, such as grills, cookers, and accessories. He believes that this new merchandise inventory will draw new customers to the store and eventually bring more profits to the business.

As Jorell prepares the merchandise inventory for sale, he must decide how the business will track the cost of each product sold. For example, if the business sells 500 identical outdoor grills that were purchased at different times and at different costs, how will the business determine the cost of each grill sold? Should the business keep detailed cost records for each specific grill sold? Or should the business use an inventory costing method that will approximate the flow of inventory costs? For example, the business might decide to assign the costs of the first grills purchased to the first grills sold rather than tracking the cost of each grill individually. Or it might decide, instead, to assign the costs of the last grills purchased to the first grills sold.

Jorell understands that he has several options when it comes to selecting an inventory costing method. He wants to select a method that will be relatively easy to implement and maintain. He knows that by selecting the best method for the business, he will be able to easily determine the cost of the goods sold and, ultimately, the gross profit.



What Is the Cost of Merchandise Inventory?

In this chapter, we expand our discussion on merchandise inventory by learning how to account for the cost of inventory. When **Dick's Sporting Goods, Inc.,** a retail chain that sells sporting goods, apparel, and footwear, purchases and sells inventory, the business must account for the inventory appropriately. Dick's must determine the cost of the inventory that is sold in order to calculate gross profit. If a business had only a small amount of inventory, identifying the cost of one particular item would be simple. However, large businesses, such as Dick's, have millions of items of inventory, which makes tracking costs very difficult. In this chapter, you learn that every business must select an inventory costing method that allows it to track costs and determine the cost of goods sold, gross profit, and value of ending merchandise inventory.

Chapter 6 Learning Objectives

1 Identify accounting principles and controls related to merchandise inventory

2 Account for merchandise inventory costs under a perpetual inventory system

3 Compare the effects on the financial statements when using the different inventory costing methods

4 Apply the lower-of-cost-or-market rule to merchandise inventory

5 Measure the effects of merchandise inventory errors on the financial statements

6 Use inventory turnover and days' sales in inventory to evaluate business performance

7 Account for merchandise inventory costs under a periodic inventory system (Appendix 6A)

WHAT ARE THE ACCOUNTING PRINCIPLES AND CONTROLS THAT RELATE TO MERCHANDISE INVENTORY?

Learning Objective 1
Identify accounting principles and controls related to merchandise inventory

Chapter 5 introduced accounting for merchandise inventory. It showed how Smart Touch Learning, a fictitious merchandiser that sells tablet computers containing e-learning software programs, recorded the purchase and sale of its inventory. The current chapter completes the accounting for merchandise inventory.

Accounting Principles

Let's begin by learning about several accounting principles that affect merchandise inventories. Among them are consistency, disclosure, materiality, and accounting conservatism.

Consistency Principle

Consistency Principle
A business should use the same accounting methods and procedures from period to period.

The **consistency principle** states that businesses should use the same accounting methods and procedures from period to period. Consistency helps investors and creditors compare a company's financial statements from one period to the next.

Suppose you are analyzing a company's net income over a two-year period in which there was an increase in net income from the first year to the second. Analysis of the income statement shows Net Sales Revenue was almost the same for both years, but Cost of Goods Sold decreased significantly, which resulted in increases in gross profit and operating income. Without further information, you might conclude that the company was able to purchase its inventory at a lower cost in the second year and that profits will continue to increase in future years. However, changing inventory costing methods could have caused this one-time change, in which case future profits will not be affected. Therefore, companies must be consistent in the accounting methods they use. If changes are made in accounting methods, these changes must be reported. Investors and creditors need this information to make wise decisions about the company.

Disclosure Principle

Disclosure Principle
A business's financial statements must report enough information for outsiders to make knowledgeable decisions about the company.

The **disclosure principle** holds that a company should report enough information for outsiders to make knowledgeable decisions about the company. In short, the company should report information that is relevant and has faithful representation. This includes disclosing the method used to account for merchandise inventories. All major accounting methods and procedures are described in the footnotes to the financial statements.

Suppose a banker is comparing two companies—one using inventory method A and the other using inventory method B. The B company reports higher net income but only because of the inventory method it selected. Without knowledge of these accounting methods, the banker could lend money to the wrong business.

Take a look at Kohl's Corporation's annual report which can be reviewed by visiting http://www.pearsonhighered.com/Horngren. After the financial statements, you will find the notes to the financial statements. These footnotes contain important information summarizing the accounting policies that Kohl's Corporation uses and ensure that the company is providing full disclosure to its investors and creditors

Materiality Concept

Materiality Concept
A company must perform strictly proper accounting only for items that are significant to the business's financial situation.

The **materiality concept** states that a company must perform strictly proper accounting *only* for significant items. Information is significant—or, in accounting terms, *material*—when it would cause someone to change a decision. The materiality concept frees accountants from having to report every last item in strict accordance with GAAP. For example, $10,000 is material to a small business with annual sales of $100,000. However, $10,000 isn't material to a large company with annual sales of $100,000,000. Therefore, the accounting principles followed for a $10,000 cost in a small company may be different from the accounting principles followed for a $10,000 cost in a large company.

Conservatism

Conservatism
A business should report the least favorable figures in the financial statements when two or more possible options are presented.

Conservatism in accounting means exercising caution in reporting items in the financial statements. Conservatism espouses the following ideas:

- Anticipate no gains, but provide for all probable losses.
- If in doubt, record an asset at the lowest reasonable amount and a liability at the highest reasonable amount.
- When there's a question, record an expense rather than an asset.
- When you are faced with a decision between two possible options, you must choose the option that undervalues, rather than overvalues, your business.

The goal of conservatism is to report realistic figures and never overstate assets or net income.

Control Over Merchandise Inventory

Maintaining good controls over merchandise inventory is very important for a merchandiser. Good controls ensure that inventory purchases and sales are properly authorized and accounted for by the accounting system. This can be accomplished by taking the following measures:

- Ensure merchandise inventory is not purchased without proper authorization, including purchasing only from approved vendors and within acceptable dollar ranges.
- After inventory is purchased, the order should be tracked and properly documented when received. At time of delivery, a count of inventory received should be completed and each item should be examined for damage.
- Damaged inventory should be properly recorded and then should either be used, disposed of, or returned to the vendor.

- A physical count of inventory should be completed at least once a year to track inventory shrinkage due to theft, damage, and errors.
- When sales are made, the inventory sold should be properly recorded and removed from the inventory count. This will prevent the company from running out of inventory, often called a *stockout*.

Try It!

Match the accounting terminology to the definitions.

1. Conservatism	**a.** A business should report the least favorable figures in the financial statements when two or more possible options are presented.
2. Materiality concept	**b.** A business's financial statements must report enough information for outsiders to make knowledgeable decisions about the company.
3. Disclosure principle	**c.** A business should use the same accounting methods and procedures from period to period.
4. Consistency principle	**d.** A company must perform strictly proper accounting only for items that are significant to the business's financial situation.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S6-1. MyAccountingLab

HOW ARE MERCHANDISE INVENTORY COSTS DETERMINED UNDER A PERPETUAL INVENTORY SYSTEM?

Learning Objective 2

Account for merchandise inventory costs under a perpetual inventory system

Previously you learned about merchandise inventory and cost of goods sold. Remember these key equations:

Ending Merchandise Inventory = Number of units *on hand* × Unit cost
Cost of Goods Sold = Number of units *sold* × Unit cost

Companies determine the number of units on hand from perpetual inventory records backed up by a physical count. Exhibit 6-1 (on the next page) gives the inventory data for TAB0503, one model of tablets that Smart Touch Learning sells.

As shown in this exhibit, Smart Touch Learning began August with 2 TAB0503s in inventory. It purchased 4 more tablets on August 5, bringing the total quantity on hand to 6 (2 + 4). On August 15, it sold 4 tablets, leaving 2 remaining on hand (6 − 4). Smart Touch Learning then purchased 12 more on August 26 and sold 10 on August 31. It had 4 TAB0503s at the end of August (2 + 12 − 10). The company sold each tablet for $500 to its customers.

Exhibit 6-1 | **Perpetual Inventory Record**

Item: TAB0503

Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand	
Aug. 1			$350	2	
5	4		$350	6	2 + 4
15		4		2	6 – 4
26	12		$350	14	
31		10		4	
Totals	16	14		4	

Measuring inventory cost is easy when prices do not change. For example, looking at Exhibit 6-1, you can see that Smart Touch Learning's cost per unit remained the same at $350. Therefore, ending inventory and cost of goods sold can be calculated easily.

Ending Merchandise Inventory = Number of units *on hand* × Unit cost
= 4 units × $350 per unit
= $1,400

Cost of Goods Sold = Number of units *sold* × Unit cost
= 14 units × $350 per unit
= $4,900

But what if unit cost does change? For example, what if the cost per unit increased to $360 on August 5 and $380 on August 26, as shown in Exhibit 6-2? When inventory is sold on August 31, how many of the tablets sold cost $350? How many cost $360? And how many cost $380? To compute ending inventory and cost of goods sold, Smart Touch Learning must assign a unit cost to each inventory item. This is done by using one of four inventory costing methods: **1.** Specific identification **2.** First-in, first-out (FIFO) **3.** Last-in, first-out (LIFO) **4.** Weighted-average.

Exhibit 6-2 | **Perpetual Inventory Record—Changes in Cost per Unit**

Item: TAB0503

Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand
Aug. 1			$350	2
5	4		$360	6
15		4		2
26	12		$380	14
31		10		4
Totals	16	14		4

Each **inventory costing method** approximates the flow of inventory costs in a business (with the exception of the specific identification method) and is used to determine the amount of cost of goods sold and ending merchandise inventory.

Inventory Costing Method
A method of approximating the flow of inventory costs in a business that is used to determine the amount of cost of goods sold and ending merchandise inventory.

Specific Identification Method

The **specific identification method** uses the specific cost of each unit of inventory to determine ending inventory and cost of goods sold. In the specific identification method, the company knows exactly which item was sold and exactly what the item cost. This costing method is best for businesses that sell unique, easily identified inventory items, such as automobiles (identified by the vehicle identification number [VIN]), jewels (a specific diamond ring), and real estate (identified by address). For instance, assume that of the 4 tablets sold on August 15, 1 had a cost of $350 and 3 had a cost of $360. As for the August 31 sale, 1 had a cost of $350 and 9 had a cost of $380. Cost of goods sold and ending merchandise inventory can be calculated as shown in Exhibit 6-3.

Specific Identification Method
An inventory costing method based on the specific cost of particular units of inventory.

Exhibit 6-3 | **Perpetual Inventory Record: Specific Identification**

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**
Aug. 1							2 units	× $ 350	= $ 700 } $ 700
5	4 units	× $ 360	= $ 1,440				2 units 4 units	× $ 350 × $ 360	= $ 700 = $ 1,440 } $ 2,140
15				1 unit 3 units	× $ 350 × $ 360	= $ 350 = $ 1,080 } $ 1,430	1 unit 1 unit	× $ 350 × $ 360	= $ 350 = $ 360 } $ 710
26	12 units	× $ 380	= $ 4,560				1 unit 1 unit 12 units	× $ 350 × $ 360 × $ 380	= $ 350 = $ 360 = $ 4,560 } $ 5,270
31				1 unit 9 units	× $ 350 × $ 380	= $ 350 = $ 3,420 } $ 3,770	1 unit 3 units	× $ 360 × $ 380	= $ 360 = $ 1,140 } $ 1,500
Totals	16 units		$ 6,000	14 units		$ 5,200	4 units		$ 1,500

Notice that under the specific identification method, when inventory is sold, a specific cost is assigned to it. For example, on the August 15 sale, Smart Touch Learning knew that it had sold 1 unit costing $350 and 3 units costing $360. This left 1 unit (2 − 1) at $350 and 1 unit (4 − 3) at $360 in ending inventory. This method requires the business to keep detailed records of inventory sales and purchases and to also be able to carefully identify the inventory that is sold.

First-In, First-Out (FIFO) Method

First-In, First-Out (FIFO) Method
An inventory costing method in which the first costs into inventory are the first costs out to cost of goods sold. Ending inventory is based on the costs of the most recent purchases.

Under the **first-in, first-out (FIFO) method**, the cost of goods sold is based on the oldest purchases—that is, the first units to come in are assumed to be the first units to go out (sold). In Exhibit 6-4, this is illustrated by the cost of goods sold coming from the *first* goods purchased, which are from the August 1 beginning inventory. FIFO costing is consistent with the physical movement of inventory (for most companies). That is, under the FIFO inventory costing method, companies sell their oldest inventory first.

Exhibit 6-4 | **Perpetual Inventory Record: First-In, First-Out (FIFO)**

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**
Aug. 1							2 units	× $ 350	= $ 700 } $ 700
5	4 units	× $ 360	= $ 1,440				2 units 4 units	× $ 350 × $ 360	= $ 700 = $ 1,440 } $ 2,140
15				2 units 2 units	× $ 350 × $ 360	= $ 700 = $ 720 } $ 1,420	2 units	× $ 360	= $ 720 } $ 720
26	12 units	× $ 380	= $ 4,560				2 units 12 units	× $ 360 × $ 380	= $ 720 = $ 4,560 } $ 5,280
31				2 units 8 units	× $ 360 × $ 380	= $ 720 = $ 3,040 } $ 3,760	4 units	× $ 380	= $ 1,520 } $ 1,520
Totals	16 units		$ 6,000	14 units		$ 5,180	4 units		$ 1,520

Smart Touch Learning began August with 2 TAB0503s that cost $350 each. After the August 5 purchase, the inventory on hand consists of 6 units (2 + 4). On August 15, the company sold 4 units. Under FIFO, the first 2 units sold had the oldest cost ($350 per unit). The next 2 units sold cost $360 each. That leaves 2 units in inventory on August 15 at $360 each. The remainder of the inventory record follows the same pattern. Consider the sale on August 31 of 10 units. The oldest cost is from August 5 (2 units @ $360). The next oldest cost is from the August 26 purchase at $380 each (8 units @ $380). This leaves 4 units in inventory on August 31 at $380 each.

The FIFO monthly summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of $5,180.
- Ending inventory: 4 units that cost a total of $1,520.

Cost of Goods Available for Sale
The total cost spent on inventory that was available to be sold during a period.

Notice the total cost of goods sold of $5,180 plus the total ending inventory of $1,520 equals the total **cost of goods available for sale** during August of $6,700 [(2 units @ $350) + (4 units @ $360) + (12 units @ $380)]. Cost of goods available for sale represents the total cost of merchandise inventory that is available for sale during the time period. Smart Touch Learning measures cost of goods sold and ending merchandise inventory in this manner to prepare its financial statements.

Journal Entries Under FIFO

The journal entries under FIFO are presented below. We assume all purchases and sales of inventory are on account. The amounts unique to FIFO are shown in blue for emphasis. All other amounts are the same for all four inventory methods.

Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory (4 × $360)	1,440	
	Accounts Payable		1,440
	Purchased inventory on account.		
15	Accounts Receivable (4 × $500)	2,000	
	Sales Revenue		2,000
	Sale on account.		
15	Cost of Goods Sold (2 × $350) + (2 × $360)	1,420	
	Merchandise Inventory		1,420
	Recorded the cost of goods sold.		
26	Merchandise Inventory (12 × $380)	4,560	
	Accounts Payable		4,560
	Purchased inventory on account.		
31	Accounts Receivable (10 × $500)	5,000	
	Sales Revenue		5,000
	Sale on account.		
31	Cost of Goods Sold (2 × $360) + (8 × $380)	3,760	
	Merchandise Inventory		3,760
	Recorded the cost of goods sold.		

A	=	L	+	E
A↑ Merchandise Inventory↑	=	L↑ Accounts Payable↑	+	E
A↑ Accounts Receivable↑	=	L	+	E↑ Sales Revenue↑
A↓ Merchandise Inventory↓	=	L	+	E↓ Cost of Goods Sold↑
A↑ Merchandise Inventory↑	=	L↑ Accounts Payable↑	+	E
A↑ Accounts Receivable↑	=	L	+	E↑ Sales Revenue↑
A↓ Merchandise Inventory↓	=	L	+	E↓ Cost of Goods Sold↑

For example, on August 5, Smart Touch Learning purchased $1,440 of inventory and made the first journal entry. On August 15, the company sold 4 TAB0503s for the sales price of $500 each. Smart Touch Learning recorded the sale, $2,000, and the cost of goods sold, $1,420 (calculated in Exhibit 6-4 as 2 units @ $350 plus 2 units @ $360). The remaining journal entries (August 26 and 31) follow the inventory data in Exhibit 6-4.

Last-In, First-Out (LIFO) Method

Last-in, first-out (LIFO) is the opposite of FIFO. Under the **last-in, first-out (LIFO) method**, ending inventory comes from the oldest costs (beginning inventory and earliest purchases) of the period. The cost of goods sold is based on the most recent purchases (new costs)—that is, the last units in are assumed to be the first units sold. This is illustrated by the cost of goods sold for the August 31 sale coming from the *last* goods in the

Last-In, First-Out (LIFO) Method
An inventory costing method in which the last costs into inventory are the first costs out to cost of goods sold. The method leaves the oldest costs—those of beginning inventory and the earliest purchases of the period—in ending inventory.

warehouse—the August 26 purchase in Exhibit 6-5. Under the LIFO inventory costing method, companies sell their newest inventory first.

Exhibit 6-5 | Perpetual Inventory Record: Last-In, First-Out (LIFO)

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							2 units	× $ 350	= $ 700 } $ 700
5	4 units	× $ 360	= $ 1,440				2 units 4 units	× $ 350 × $ 360	= $ 700 = $ 1,440 } $ 2,140
15				4 units	× $ 360	= $ 1,440 } $ 1,440	2 units	× $ 350	= $ 700 } $ 700
26	12 units	× $ 380	= $ 4,560				2 units 12 units	× $ 350 × $ 380	= $ 700 = $ 4,560 } $ 5,260
31				10 units	× $ 380	= $ 3,800 } $ 3,800	2 units 2 units	× $ 350 × $ 380	= $ 700 = $ 760 } $ 1,460
Totals	16 units		$ 6,000	14 units		$ 5,240	4 units		$ 1,460

LIFO is not permitted under International Financial Reporting Standards (IFRS). Under IFRS, companies may only use the specific identification, FIFO, and weighted-average methods to cost inventory. If LIFO were eliminated as an acceptable method under GAAP, those U.S. companies currently using the LIFO cost method would experience significant income statement and balance sheet effects. Approximately one-third of U.S. companies use the LIFO method to cost at least part of their inventory.

Again, Smart Touch Learning had 2 TAB0503s at the beginning. After the purchase on August 5, the company holds 6 units of inventory (2 units @ $350 plus 4 units @ $360). On August 15, Smart Touch Learning sells 4 units. Under LIFO, the cost of goods sold always comes from the most recent purchase (4 units @ $360). That leaves 2 TAB0503s in inventory on August 15 (2 units @ $350).

The purchase of 12 units on August 26 adds a new $380 layer to inventory. Now inventory holds 14 units.

Then the sale of 10 units on August 31 peels back units in LIFO order (10 units @ $380). The LIFO monthly summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of $5,240.
- Ending inventory: 4 units that cost a total of $1,460.

Under LIFO, Smart Touch Learning could measure cost of goods sold and ending inventory in this manner to prepare its financial statements.

Journal Entries Under LIFO

The journal entries under LIFO follow. We assume all purchases and sales of inventory are on account. Amounts unique to LIFO are shown in blue.

Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory (4 × $360)	1,440	
	Accounts Payable		1,440
	Purchased inventory on account.		
15	Accounts Receivable (4 × $500)	2,000	
	Sales Revenue		2,000
	Sale on account.		
15	Cost of Goods Sold (4 × $360)	1,440	
	Merchandise Inventory		1,440
	Recorded the cost of goods sold.		
26	Merchandise Inventory (12 × $380)	4,560	
	Accounts Payable		4,560
	Purchased inventory on account.		
31	Accounts Receivable (10 × $500)	5,000	
	Sales Revenue		5,000
	Sale on account.		
31	Cost of Goods Sold (10 × $380)	3,800	
	Merchandise Inventory		3,800
	Recorded the cost of goods sold.		

A↑ Merchandise Inventory↑ = L↑ Accounts Payable↑ + E

A↑ Accounts Receivable↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

A↑ Merchandise Inventory↑ = L↑ Accounts Payable↑ + E

A↑ Accounts Receivable↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

On August 5, Smart Touch Learning purchased inventory of $1,440. The August 15 sale brought in sales revenue (4 units @ $500 = $2,000) and cost of goods sold (4 units @ $360 = $1,440). The August 26 and 31 entries also come from the data in Exhibit 6-5.

Think about going to the grocery store to buy a gallon of milk. Which gallon is in front of the milk cooler: the older milk or the newer milk? The older milk is in front. That's FIFO. Now visualize reaching all the way to the back of the cooler to get the newer milk. That's LIFO. It's important to understand that although this image represents the physical flow of goods, an inventory costing system may or may not match the physical flow. The costing system is only an assumption about how costs flow. The inventory does not have to actually be sold in the FIFO manner in order to record it as FIFO.

Weighted-Average Method

Under the **weighted-average method** (sometimes called *moving-average method*), the business computes a new weighted-average cost per unit after each purchase. Ending inventory and cost of goods sold are then based on the same weighted-average cost per unit. After the

Weighted-Average Method
An inventory costing method based on the weighted-average cost per unit of inventory that is calculated after each purchase. Weighted-average cost per unit is determined by dividing the cost of goods available for sale by the number of units available.

first purchase on August 5, the weighted-average cost per unit sold falls somewhere between the beginning inventory cost of $350 and the most recent purchase cost of $360.

Exhibit 6-6 shows a perpetual inventory record for the weighted-average method. We round average unit cost to the nearest cent and total cost to the nearest dollar.

Exhibit 6-6 | Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**
Aug. 1							2 units	× $ 350	= $ 700
5	4 units	× $ 360	= $ 1,440				6 units	× $ 356.67	= $ 2,140 $ 2,140 / 6 units = $ 356.67
15				4 units	× $ 356.67	= $ 1,427	2 units	× $ 356.67	= $ 713
26	12 units	× $ 380	= $ 4,560				14 units	× $ 376.64	= $ 5,273 $ 5,273 / 14 units = $ 376.64
31				10 units	× $ 376.64	= $ 3,766	4 units	× $ 376.64	= $ 1,507
Totals	16 units		$ 6,000	14 units		$ 5,193	4 units		$ 1,507

As noted previously, after each purchase, Smart Touch Learning computes a new weighted-average cost per unit. For example, on August 5, the new weighted-average unit cost is as follows:

Cost of goods available for sale / Number of units available = ($700 + $1,440) / (2 units + 4 units)
= $2,140 / 6 units
= $356.67 (rounded)

Under the weighted-average method, the cost per unit is a weighted average. You cannot take the average of the two unit costs ($350 and $360) to determine the new unit cost. Instead, you must use the total cost of goods available for sale ($2,140) divided by the number of units available (6 units).

The goods sold on August 15 are then costed out at $356.67 per unit. On August 26 when the next purchase is made, the new weighted-average unit cost is as follows:

Cost of goods available for sale / Number of units available = ($713 + $4,560) / (2 units + 12 units)
= $5,273 / 14 units
= $376.64 (rounded)

The weighted-average cost summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of $5,193.
- Ending inventory: 4 units that cost a total of $1,507.

With the weighted-average cost method, rounding errors can occur. However, this is not the case in this example. Notice that cost of goods sold and ending inventory total \$6,700 (\$5,193 + \$1,507), which equals the total cost of goods available for sale.

Under the weighted-average cost method, Smart Touch Learning could use these amounts to prepare its financial statements.

Journal Entries Under Weighted-Average

The journal entries under weighted-average costing follow. We assume all purchases and sales of inventory are on account. Amounts unique to the weighted-average method are shown in blue.

Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory (4 × \$360)	1,440	
	Accounts Payable		1,440
	Purchased inventory on account.		
15	Accounts Receivable (4 × \$500)	2,000	
	Sales Revenue		2,000
	Sale on account.		
15	Cost of Goods Sold (4 × \$356.67)	1,427	
	Merchandise Inventory		1,427
	Recorded the cost of goods sold.		
26	Merchandise Inventory (12 × \$380)	4,560	
	Accounts Payable		4,560
	Purchased inventory on account.		
31	Accounts Receivable (10 × \$500)	5,000	
	Sales Revenue		5,000
	Sale on account.		
31	Cost of Goods Sold (10 × \$376.64)	3,766	
	Merchandise Inventory		3,766
	Recorded the cost of goods sold.		

A↑ Merchandise Inventory↑ = L↑ Accounts Payable↑ + E

A↑ Accounts Receivable↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

A↑ Merchandise Inventory↑ = L↑ Accounts Payable↑ + E

A↑ Accounts Receivable↑ = L + E↑ Sales Revenue↑

A↓ Merchandise Inventory↓ = L + E↓ Cost of Goods Sold↑

On August 5, Smart Touch Learning purchased \$1,440 of inventory and made the first journal entry. On August 15, Smart Touch Learning sold 4 TAB0503s for \$500 each. The company recorded the sale (\$2,000) and the cost of goods sold (4 units at \$356.67 = \$1,427). The remaining journal entries (August 26 and 31) follow the same procedure.

Try It!

5. Serenity Books has the following transactions in August related to merchandise inventory.

Aug. 1	Beginning merchandise inventory, 10 books @ $15 each
3	Sold 3 books @ $20 each
12	Purchased 8 books @ $18 each
15	Sold 9 books @ $20 each
20	Purchased 4 books @ $20 each
28	Sold 5 books @ $25 each

a. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the specific identification method. Assume the following costing information for the books sold during the month:

August 3: 3 books costing $15 each
August 15: 4 books costing $15 each and 5 books costing $18 each
August 28: 2 books costing $18 each and 3 books costing $20 each

b. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the FIFO inventory costing method.

c. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the LIFO inventory costing method.

d. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the weighted-average inventory costing method. Round weighted-average unit cost to the nearest cent and total cost to the nearest dollar.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S6-2 through S6-6. MyAccountingLab

HOW ARE FINANCIAL STATEMENTS AFFECTED BY USING DIFFERENT INVENTORY COSTING METHODS?

Learning Objective 3
Compare the effects on the financial statements when using the different inventory costing methods

What leads Smart Touch Learning to select the specific identification, FIFO, LIFO, or weighted-average inventory costing method? The different methods have different benefits.

Income Statement

Exhibit 6-7 summarizes the results for the four inventory costing methods for Smart Touch Learning. It shows sales revenue, cost of goods sold, and gross profit for specific identification, FIFO, LIFO, and weighted-average.

Exhibit 6-7 shows that FIFO produces the lowest cost of goods sold and the highest gross profit for Smart Touch Learning. Because operating expenses are the same, regardless of

Exhibit 6-7 | **Comparative Results for Specific Identification, FIFO, LIFO, and Weighted-Average—Income Statement**

	Specific Identification	FIFO	LIFO	Weighted-Average
Net Sales Revenue (14 units × $500)	$ 7,000	$ 7,000	$ 7,000	$ 7,000
Less: Cost of Goods Sold	5,200	5,180	5,240	5,193
Gross Profit	$ 1,800	$ 1,820	$ 1,760	$ 1,807

which inventory method a company uses, net income is also the highest under FIFO when inventory costs are rising. **Many companies prefer high income in order to attract investors and borrow on favorable terms. FIFO offers this benefit in a period of rising costs.**

How do businesses decide which inventory costing method to use?

When inventory costs are rising, LIFO results in the highest cost of goods sold and the lowest gross profit. **Lower profits mean lower taxable income; thus, LIFO lets companies pay the lowest income taxes when inventory costs are rising.** Low tax payments conserve cash, and that is the main benefit of LIFO. The downside of LIFO is that the company reports lower net income.

The weighted-average method generates amounts that fall between the extremes of FIFO and LIFO. **Therefore, companies that seek a "middle-ground" solution use the weighted-average method for inventory.**

Balance Sheet

Consider again the beginning inventory and purchases made by Smart Touch Learning during August. The company had total inventory available for sale in August as follows:

Aug. 1	2 units × $350	$ 700
Aug. 5	4 units × $360	1,440
Aug. 26	12 units × $380	4,560
Cost of goods available for sale		$ 6,700

Only one of two things can happen to the tablets—either they remain in the warehouse (ending merchandise inventory) or they are sold (Cost of Goods Sold). Ending merchandise inventory can be calculated by determining first the cost of goods available for sale (beginning merchandise inventory plus inventory purchased) and then subtracting merchandise inventory sold (Cost of Goods Sold). Exhibit 6-8 (on the next page) shows the results of Smart Touch Learning's ending merchandise inventory for each of the costing methods for August.

When using the FIFO inventory costing method, ending merchandise inventory will be the highest when costs are increasing. LIFO produces the lowest ending merchandise inventory with weighted-average again in the middle.

So far, we have been ignoring the effects on the income statement and balance sheet when using the specific identification method. This is because under specific identification, the results will vary depending on which costs are assigned to the inventory sold. Most companies will not choose to use the specific identification method unless they want to match each inventory item sold with its exact cost.

Exhibit 6-8 | **Comparative Results for Specific Identification, FIFO, LIFO, and Weighted-Average—Balance Sheet**

	Specific Identification	FIFO	LIFO	Weighted-Average
Beginning Merchandise Inventory	$ 700	$ 700	$ 700	$ 700
Plus: Net Cost of Purchases	6,000	6,000	6,000	6,000
Cost of Goods Available for Sale	6,700	6,700	6,700	6,700
Less: Cost of Goods Sold	5,200	5,180	5,240	5,193
Ending Merchandise Inventory	$ 1,500	$ 1,520	$ 1,460	$ 1,507

The weighted-average ending merchandise inventory number shown in Exhibit 6-6 may be slightly different than that found in Exhibit 6-8. This is because of rounding. When completing your homework, always read carefully for directions on how to round when using the weighted-average method.

We have looked at the effects of different inventory costing methods on the financial statements when inventory costs are rising. When inventory costs are instead declining, the effects on the financial statements will be the opposite of those discussed above. Exhibit 6-9 summarizes the effects of different inventory costing methods on the financial statements during periods of rising and declining inventory costs.

Exhibit 6-9 | **Effects on the Financial Statements During Periods of Rising and Declining Inventory Costs**

Period of Rising Inventory Costs:				
	Specific Identification	**FIFO**	**LIFO**	**Weighted-Average**
Income Statement:				
Cost of Goods Sold	Varies	Lowest	Highest	Middle
Net Income	Varies	Highest	Lowest	Middle
Balance Sheet:				
Ending Merchandise Inventory	Varies	Highest	Lowest	Middle

Period of Declining Inventory Costs:				
	Specific Identification	**FIFO**	**LIFO**	**Weighted-Average**
Income Statement:				
Cost of Goods Sold	Varies	Highest	Lowest	Middle
Net Income	Varies	Lowest	Highest	Middle
Balance Sheet:				
Ending Merchandise Inventory	Varies	Lowest	Highest	Middle

Try It!

6. Antelope Motors is considering which inventory costing method it should use. The business wants to maximize gross profits during a period of declining costs. Which inventory costing method should Antelope Motors select?

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S6-7. MyAccountingLab

HOW IS MERCHANDISE INVENTORY VALUED WHEN USING THE LOWER-OF-COST-OR-MARKET RULE?

Learning Objective 4

Apply the lower-of-cost-or-market rule to merchandise inventory

In addition to the specific identification, FIFO, LIFO, and weighted-average inventory costing methods, accountants face other inventory issues, such as the **lower-of-cost-or-market (LCM) rule.** LCM shows accounting conservatism in action and requires that merchandise inventory be reported in the financial statements at whichever is lower of the following:

- The historical cost of the inventory
- The market value of the inventory

Lower-of-Cost-or-Market (LCM) Rule

Rule that merchandise inventory should be reported in the financial statements at whichever is lower—its historical cost or its market value.

Computing the Lower-of-Cost-or-Market

For inventories, market value generally means the current replacement cost (that is, the cost to replace the inventory on hand). If the replacement cost of inventory is less than its historical cost, the business must adjust the inventory value. By adjusting the inventory down (crediting Merchandise Inventory), the balance sheet value of the asset, Merchandise Inventory, is at its correct value (market) rather than its overstated value (cost). If the merchandise inventory's market value is greater than cost, then we don't adjust the Merchandise Inventory account because of the conservatism principle.

IFRS

Under International Financial Reporting Standards, inventory must be reported at the lower-of-cost-or-market value. However, "market" is defined differently. Under IFRS, the market value of inventory is defined as the "net realizable value," or essentially its sales price. If the historical cost is higher than the sales price, then inventory must be written down. The IFRS approach results in fewer write-downs on inventory.

Recording the Adjusting Journal Entry to Adjust Merchandise Inventory

Suppose Smart Touch Learning paid $3,000 for its TAB0503 inventory. By December 31, the merchandise inventory can now be replaced for $2,200, and the decline in value appears permanent. Market value is below cost, and the entry to write down the inventory to LCM is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold	800	
	Merchandise Inventory ($3,000 – $2,200)		800
	To write merchandise inventory down to market value.		

$$\frac{\mathbf{A}\downarrow}{\text{Merchandise Inventory}\downarrow} = \frac{\mathbf{L}}{} + \frac{\mathbf{E}\downarrow}{\text{Cost of Goods Sold}\uparrow}$$

In this case, Smart Touch Learning's balance sheet would report this inventory as follows:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2019	
Current Assets:	
Merchandise Inventory	$ 2,200

Companies often disclose that the LCM rule is followed in notes to their financial statements, as shown here for Smart Touch Learning:

> NOTE 2: STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES
> *Merchandise Inventories*. Merchandise inventories are carried at the *lower-of-cost-or-market*. Cost is determined using the first-in, first-out method.

TYING IT ALL TOGETHER

Dick's Sporting Goods, Inc. is a leading sporting goods retailer that offers high-quality sports equipment, apparel, footwear, and other accessories. The company was founded in 1948 when Richard "Dick" Stack opened his original bait and tackle store in Binghamton, New York. Today, Dick's Sporting Goods operates over 600 stores in 47 states. The company sells a variety of sporting goods, active apparel, and footwear that appeals to the beginner, intermediate, and enthusiast sports consumer. (You can find Dick's Sporting Goods, Inc.'s annual report at https://www.sec.gov/Archives/edgar/data/1089063/000108906316000107/dks-10k_20160130.htm)

Would Dick's Sporting Goods most likely use a perpetual or periodic inventory system and why?

Dick's Sporting Goods would most likely use a perpetual inventory system. The company would be interested in keeping a running computerized record of its merchandise inventory in order to know the quantity of merchandise on hand and its costs. A perpetual inventory system also allows companies to have better control over their inventory. Companies, such as Dick's Sporting Goods, use bar codes that track the flow of inventory enabling the company to easily know the types and amounts of inventory in each store and when the company needs to reorder.

What inventory costing method does Dick's Sporting Goods use?

According to the notes to the financial statements, Dick's Sporting Goods uses the weighted-average cost method. This inventory method requires Dick's to compute a new weighted-average cost per unit after each purchase and records ending merchandise inventory somewhere between the lowest and highest cost. Use of the weighted-average method falls between the extremes of FIFO and LIFO.

Given that Dick's Sporting Goods uses a perpetual inventory system, would they still do a physical count of inventories? Why or why not?

Dick's Sporting Goods would still do a physical count of inventories. In the notes to the financial statements, the company states that it performs physical counts of inventories in its stores and distribution centers throughout the year. This physical count of inventory is necessary even though the company uses a perpetual inventory system in order to determine the amount of inventory shrinkage. Inventory shrinkage refers to the loss of inventory that occurs due to theft, damage, and errors. A company would want to know the amount of inventory shrinkage in order to report the correct amount of inventory on the company's balance sheet.

Try It!

7. T. J. Jackson Supplies had merchandise inventory that cost $1,300. The market value of the merchandise inventory is $750. What value should Jackson Supplies show on the balance sheet for merchandise inventory? Record the adjusting entry, if one is needed.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S6-8. MyAccountingLab

WHAT ARE THE EFFECTS OF MERCHANDISE INVENTORY ERRORS ON THE FINANCIAL STATEMENTS?

Learning Objective 5
Measure the effects of merchandise inventory errors on the financial statements

Businesses perform a physical count of their merchandise inventory at the end of the accounting period. For the financial statements to be accurate, it is important to get a correct count. This can be difficult for a company with widespread operations.

An error in ending merchandise inventory creates a whole string of errors in other related accounts. To illustrate, suppose Smart Touch Learning accidentally reported $5,000 more ending merchandise inventory than it actually had. In that case, ending merchandise inventory would be overstated by $5,000 on the balance sheet. The following shows how an overstatement of ending inventory affects cost of goods sold, gross profit, and net income:

	Ending Merchandise Inventory Overstated $5,000
Net Sales Revenue	Correct
Cost of Goods Sold:	
Beginning Merchandise Inventory	Correct
Net Cost of Purchases	Correct
Cost of Goods Available for Sale	Correct
Less: Ending Merchandise Inventory	ERROR: Overstated $5,000
Cost of Goods Sold	Understated $5,000
Gross Profit	Overstated $5,000
Operating Expenses	Correct
Net Income	Overstated $5,000

Understating the ending inventory—reporting the inventory too low—has the opposite effect. If Smart Touch Learning understated the inventory by $1,200, the effect would be as shown here:

	Ending Merchandise Inventory Understated $1,200
Net Sales Revenue	Correct
Cost of Goods Sold:	
Beginning Merchandise Inventory	Correct
Net Cost of Purchases	Correct
Cost of Goods Available for Sale	Correct
Less: Ending Merchandise Inventory	ERROR: Understated $1,200
Cost of Goods Sold	Overstated $1,200
Gross Profit	Understated $1,200
Operating Expenses	Correct
Net Income	Understated $1,200

Recall that one period's ending merchandise inventory becomes the next period's beginning inventory. As a result, an error in ending merchandise inventory carries over into the next period. Exhibit 6-10 (on the next page) illustrates the effect of an inventory

error, assuming all other items on the income statement are unchanged for the three periods. Period 1's ending merchandise inventory is overstated by $5,000; Period 1's ending merchandise inventory should be $10,000. The error carries over to Period 2. Period 3 is correct. In fact, both Period 1 and Period 2 should look like Period 3.

Exhibit 6-10 | Inventory Errors

SAMPLE COMPANY
Income Statement
For the Years Ended Periods 1, 2, and 3

	Period 1		Period 2		Period 3	
	Ending Merchandise Inventory Overstated by $5,000		*Beginning* Merchandise Inventory Overstated by $5,000		Correct	
Net Sales Revenue		$ 100,000		$ 100,000		$ 100,000
Cost of Goods Sold:						
Beginning Merchandise Inventory	$ 10,000		$ 15,000		$ 10,000	
Net Cost of Purchases	50,000		50,000		50,000	
Cost of Goods Available for Sale	60,000		65,000		60,000	
Less: Ending Merchandise Inventory	15,000		10,000		10,000	
Cost of Goods Sold		45,000		55,000		50,000
Gross Profit		$ 55,000		$ 45,000		$ 50,000

The correct gross profit is $50,000 for each period. $\underbrace{\qquad\qquad\qquad}_{\$100,000}$

Ending merchandise inventory is *subtracted* to compute cost of goods sold in one period and the same amount is *added* as beginning merchandise inventory in the next period. Therefore, an inventory error cancels out after two periods. The overstatement of cost of goods sold in Period 2 counterbalances the understatement for Period 1. Thus, total gross profit for the two periods combined is correct. The effects of inventory errors are summarized in Exhibit 6-11.

Exhibit 6-11 | Effects of Inventory Errors

SAMPLE COMPANY
Income Statement
For the Years Ended Periods 1 and 2

	Period 1		Period 2	
	Cost of Goods Sold	Gross Profit and Net Income	Cost of Goods Sold	Gross Profit and Net Income
Period 1 Ending Merchandise Inventory *overstated*	Understated	Overstated	Overstated	Understated
Period 1 Ending Merchandise Inventory *understated*	Overstated	Understated	Understated	Overstated

ETHICS

Should the inventory be included?

One of A'isha Sowell's main responsibilities at the end of the accounting period is to supervise the count of physical inventory for her employer. She knows that it is important that the business get an accurate count of inventory so that its financial statements are reported correctly. In reviewing the inventory count sheet, she realizes that a large crate of inventory that has already been sold but not yet delivered was included in the count of inventory. The crate has left her employer but is still in transit at fiscal year-end. A'isha does not believe that it should be included because the inventory was sold FOB shipping point. When A'isha went to her supervisor with this information, she was told that she shouldn't worry about it because the error would ultimately correct itself. What should A'isha do?

Solution

Companies whose profits are lagging can be tempted to increase reported income to make the business look more successful. One easy way to do this is to overstate ending inventory. A'isha is correct in her assumption that the inventory should not be included in the physical count of inventory. While this error will ultimately correct itself (in two years), in the current year, the business will be overstating gross profit and net income. This overstatement could cause investors to view the business more favorably than they should. A'isha should stand firm in her decision to not include the inventory in the count.

Try It!

8. The Shirley's Gourmet Foods' merchandise inventory data for the year ended December 31, 2018, follow:

Net Sales Revenue		$ 48,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 3,360	
Net Cost of Purchases	21,280	
Cost of Goods Available for Sale	24,640	
Less: Ending Merchandise Inventory	4,960	
Cost of Goods Sold		19,680
Gross Profit		$ 28,320

Assume that the ending merchandise inventory was accidentally overstated by $1,920. What are the correct amounts for cost of goods sold and gross profit?

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S6-9. MyAccountingLab

HOW DO WE USE INVENTORY TURNOVER AND DAYS' SALES IN INVENTORY TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6
Use inventory turnover and days' sales in inventory to evaluate business performance

Businesses strive to sell merchandise inventory quickly because the merchandise inventory generates no profit until it is sold. Further, fast-selling inventory is less likely to become obsolete (worthless) and does not require the business to pay for high storage and insurance

costs often associated with keeping inventory on hand. There are two ratios that help businesses monitor their inventory levels: inventory turnover and days' sales in inventory.

Inventory Turnover Measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold / Average merchandise inventory.

Inventory Turnover

Companies try to manage their inventory levels such that they will have just enough inventory to meet customer demand without investing large amounts of money in inventory sitting on the shelves gathering dust. **Inventory turnover** measures how rapidly merchandise inventory is sold. It is computed as follows:

Inventory turnover = Cost of goods sold / Average merchandise inventory
Average merchandise inventory = (Beginning merchandise inventory + Ending merchandise inventory) / 2

A high rate of turnover indicates ease in selling inventory; a low rate indicates difficulty. For example, an inventory value of 4 means that the company sold its average level of inventory four times—once every three months—during the year. Inventory turnover varies widely with the nature of the business and should be evaluated against industry averages.

Days' Sales in Inventory Measures the average number of days that inventory is held by a company. 365 days / Inventory turnover.

Days' Sales in Inventory

Another key measure is the **days' sales in inventory** ratio. This ratio measures the average number of days merchandise inventory is held by the company and is calculated as follows:

Days' sales in inventory = 365 days / Inventory turnover

Days' sales in inventory also varies widely, depending on the business. A lower days' sales in inventory is preferable because it indicates that the company is able to sell its inventory quickly, thereby reducing its inventory storage and insurance costs, as well as reducing the risk of holding obsolete inventory.

Let's return to **Kohl's Corporation** and evaluate the company's inventory levels using the two ratios discussed. Visit http://www.pearsonhighered.com/Horngren to view a link to Kohl's Corporation's annual report. Presented below are the cost of goods sold and beginning and ending merchandise inventory figures (in millions) from Kohl's Corporation's income statement for the year ended January 30, 2016, and balance sheet on January 30, 2016.

Cost of goods sold (Cost of merchandise sold)	$ 12,265
Beginning merchandise inventory	3,814
Ending merchandise inventory	4,038

Kohl's inventory turnover is 3.12 times per year and is calculated as:

Inventory turnover = Cost of goods sold / Average merchandise inventory
= $12,265 / [($3,814 + $4,038) / 2]
= 3.12 times per year

Its days' sales in inventory is 117 days and is calculated as:

Days' sales in inventory = 365 days / Inventory turnover
= 365 days / 3.12
= 117.0* days

*rounded

It appears that Kohl's sells its average inventory 3.12 times per year. A high turnover rate is desirable, and an increase in the turnover rate usually means higher profits. In addition, the days' sales in inventory of Kohl's indicates that the company, on average, takes 117 days to sell inventory. This seems a little high for a retail store, but it should be evaluated against the industry average.

Try It!

9. The Opa's Carving Shop had the following financial data for the year ended December 31, 2018:

Cost of Goods Sold	$ 484,000
Beginning Merchandise Inventory	88,800
Ending Merchandise Inventory	111,200

What are the inventory turnover and days' sales in inventory for the year?

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S6-10. MyAccountingLab

APPENDIX 6A: Merchandise Inventory Costs Under a Periodic Inventory System

HOW ARE MERCHANDISE INVENTORY COSTS DETERMINED UNDER A PERIODIC INVENTORY SYSTEM?

Learning Objective 7
Account for merchandise inventory costs under a periodic inventory system

We described the periodic inventory system briefly in the previous chapter. Accounting is simpler in a periodic inventory system because the company keeps no daily running record of inventory on hand. The only way to determine the ending merchandise inventory and cost of goods sold in a periodic inventory system is to take a physical inventory to count the goods left (on hand)—usually at the end of the fiscal year. The periodic inventory system works well for a small business in which the inventory can be controlled by visual inspection—that is, the inventory usually is not large in size or dollar amount.

The various inventory costing methods (specific identification, FIFO, LIFO, and weighted-average) in a periodic inventory system follow the pattern illustrated earlier for the perpetual inventory system. To show how the periodic inventory system works, we use the same Smart Touch Learning data that we used for the perpetual inventory system (see Exhibit 6A-1, on the next page).

Exhibit 6A-1 | **Perpetual Inventory Record—Changes in Cost per Unit**

Item: TAB0503

Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand
Aug. 1			$350	2
5	4		$360	6
15		4		2
26	12		$380	14
31		10		4
Totals	16	14		4

We use these data to illustrate FIFO, LIFO, and weighted-average cost. We will not illustrate the specific identification inventory costing method because it is calculated the same under both the perpetual and periodic inventory systems.

For all four inventory costing methods, cost of goods available for sale is always the sum of beginning inventory plus net purchases:

Beginning merchandise inventory (2 units × $350)	$ 700
Plus: Net purchases (4 units × $360) + (12 units × $380)	6,000
Cost of goods available for sale	$ 6,700

The different methods—specific identification, FIFO, LIFO, and weighted-average cost—compute different amounts for ending inventory and cost of goods sold. In other words, the $6,700 invested in cost of goods available for sale will be either on the balance sheet in Merchandise Inventory or expensed on the income statement, as Cost of Goods Sold. The amount on the balance sheet will be the cost of the four tablets that were not sold and are still on hand. The amount on the income statement will be the cost of the 14 tablets sold.

First-In, First-Out (FIFO) Method

Under FIFO, the ending inventory comes from the newest—the most recent—purchases, which cost $380 per unit as illustrated below:

Beginning merchandise inventory (2 units × $350)	$ 700
Net cost of purchases (4 units × $360) + (12 units × $380)	6,000
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (4 × $380)	(1,520)
Cost of goods sold	$ 5,180

Notice that the FIFO periodic cost of goods sold is $5,180, exactly the same amount as we calculated using the FIFO perpetual inventory method. The amounts obtained for cost of goods sold and ending merchandise inventory are always the same for FIFO perpetual and FIFO periodic. This occurs because FIFO sells the oldest inventory acquisitions first. Therefore, it does not matter when FIFO is calculated; the earliest purchase will always be the same whether we calculate cost of goods sold on the sale date (perpetual) or at the end of the period (periodic).

APPENDIX 6A

Last-In, First-Out (LIFO) Method

Under LIFO, the ending inventory comes from the oldest costs of the period—in this case, the beginning inventory of two units that cost $350 per unit, plus two from the first purchase at $360. LIFO is calculated as follows:

Beginning merchandise inventory (2 units × $350)	$ 700
Net cost purchases (4 units × $360) + (12 units × $380)	6,000
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (2 × $350) + (2 × $360)	(1,420)
Cost of goods sold	$ 5,280

Weighted-Average Method

In the weighted-average inventory costing method, when using the periodic inventory system, we compute a single weighted-average cost per unit for the entire period:

Cost of goods available for sale (entire period) / Number of units available = $6,700 / 18 units*
= $372.22 (rounded)

*2 units from beginning inventory + 16 units purchased during August

Then apply this weighted-average cost to compute ending merchandise inventory (rounded to the nearest dollar) and cost of goods sold, as shown:

Beginning merchandise inventory (2 units × $350)	$ 700
Net cost of purchases (4 units × $360) + (12 units × $380)	6,000
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (4 × $372.22)	(1,489)
Cost of goods sold	$ 5,211

Notice that when using the periodic system with the LIFO and weighted-average methods, the dollar amounts obtained for the ending merchandise inventory and cost of goods sold are different than those obtained with the perpetual inventory system. This is because the perpetual inventory system keeps a running balance of inventory while the periodic inventory system does not. Under the periodic inventory system, the ending merchandise inventory is determined without regard to when the sales dates of inventory occurred.

APPENDIX 6A

Try It!

10A. Serenity Books has the following transactions in August related to merchandise inventory.

Aug. 1	Beginning merchandise inventory, 10 books @ $15 each
3	Sold 3 books @ $20 each
12	Purchased 8 books @ $18 each
15	Sold 9 books @ $20 each
20	Purchased 4 books @ $20 each
28	Sold 5 books @ $25 each

a. Determine the cost of goods sold and ending merchandise inventory using the FIFO inventory costing method assuming Serenity Books uses the periodic inventory system.

b. Determine the cost of goods sold and ending merchandise inventory using the LIFO inventory costing method assuming Serenity Books uses the periodic inventory system.

c. Determine the cost of goods sold and ending merchandise inventory using the weighted-average inventory costing method assuming Serenity Books uses the periodic inventory system.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S6A-11 through S6A-13. MyAccountingLab

REVIEW

> Things You Should Know

1. What are the accounting principles and controls that relate to merchandise inventory?

- Consistency principle: Businesses should use the same accounting methods and procedures from period to period.
- Disclosure principle: A company's financial statements should report enough information for outsiders to make knowledgeable decisions about the company.
- Materiality concept: A company must perform strictly proper accounting only for significant items.
- Conservatism: A company should exercise caution in reporting items in the financial statements.
- Controls over merchandise inventory ensure that inventory purchases and sales are properly authorized and accounted for by the accounting system.

2. How are merchandise inventory costs determined under a perpetual inventory system?

- Four costing methods can be used to determine merchandise inventory costs:
  - Specific identification method—Uses the specific cost of each unit of inventory to determine ending inventory and cost of goods sold.

- First-in, first-out (FIFO) method—First costs into inventory are the first costs out to cost of goods sold; ending inventory is based on the costs of the most recent purchases.
- Last-in, first-out (LIFO) method—Last costs into inventory are the first costs out to cost of goods sold; ending inventory is based on the costs of the oldest inventory.
- Weighted-average method—Method based on the weighted-average cost per unit of inventory after each purchase. Weighted-average cost per unit is determined by dividing the cost of goods available for sale by the number of units available for sale.

3. How are financial statements affected by using different inventory costing methods?

- The FIFO method results in the lowest cost of goods sold and the highest gross profit when costs are rising.
- The LIFO method results in the highest cost of goods sold and the lowest gross profit when costs are rising.
- The weighted-average method generates amounts for cost of goods sold and gross profit that fall between FIFO and LIFO if costs are consistently increasing or decreasing.

4. How is merchandise inventory valued when using the lower-of-cost-or-market rule?

- Lower-of-cost-or-market requires that merchandise be reported in the financial statements at whichever is lower of the following:
  - The historical cost of the inventory
  - The market value of the inventory
- An adjusting entry must be recorded to write down merchandise inventory if the market value is lower than the historical cost.

5. What are the effects of merchandise inventory errors on the financial statements?

- An error in ending merchandise inventory creates a whole string of errors in other related accounts.
- One period's ending merchandise inventory becomes the next period's beginning merchandise inventory.

6. How do we use inventory turnover and days' sales in inventory to evaluate business performance?

- Inventory turnover measures how rapidly merchandise inventory is sold and is calculated as:

  Cost of goods sold / Average merchandise inventory.
- Days' sales in inventory measures the average number of days merchandise inventory is held by the company and is calculated as:

  365 days / Inventory turnover.

7. How are merchandise inventory costs determined under a periodic inventory system? (Appendix 6A)

- Specific identification, FIFO, LIFO, and weighted-average can be used in a periodic inventory system.
- Specific identification and FIFO will produce the same amounts for ending merchandise inventory and cost of goods sold under both the perpetual and periodic inventory systems.
- LIFO and weighted-average generally result in different amounts for ending merchandise inventory and cost of goods sold under the perpetual and periodic inventory systems.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Watches R Us specializes in designer watches and leather goods. Watches R Us uses the perpetual inventory system. Assume Watches R Us began June holding 10 wristwatches that cost $50 each. During June, Watches R Us bought and sold inventory as follows:

Jun. 3	Sold 8 units for $100 each.
16	Purchased 10 units at $56 each.
23	Sold 8 units for $100 each.

Requirements

1. Prepare a perpetual inventory record for Watches R Us using the FIFO, LIFO, and weighted-average inventory costing methods. (See Learning Objective 2)
2. Journalize all of Watches R Us's inventory transactions for June under all three costing methods. Assume all sales and purchases are on account. Explanations are not required. (See Learning Objective 2)
3. Show the computation of gross profit for each method. (See Learning Objective 2)
4. Which method maximizes net income? Which method minimizes income taxes? (See Learning Objective 3)

> Solution

1. Perpetual inventory records:

FIFO:

Date	Purchases Quantity	Purchases Unit Cost	Purchases Total Cost	Cost of Goods Sold Quantity	Cost of Goods Sold Unit Cost	Cost of Goods Sold Total Cost		Inventory on Hand Quantity	Inventory on Hand Unit Cost	Inventory on Hand Total Cost	
Jun. 1								10 units	× $ 50	= $ 500	$ 500
3				8 units	× $ 50	= $ 400	$ 400	2 units	× $ 50	= $ 100	$ 100
16	10 units	× $ 56	= $ 560					2 units 10 units	× $ 50 × $ 56	= $ 100 = $ 560	$ 660
23				2 units 6 units	× $ 50 × $ 56	= $ 100 = $ 336	$ 436	4 units	× $ 56	= $ 224	$ 224
Totals	10 units		$ 560	16 units			$ 836	4 units			$ 224

LIFO:

Date	Purchases Quantity	Purchases Unit Cost	Purchases Total Cost	Cost of Goods Sold Quantity	Cost of Goods Sold Unit Cost	Cost of Goods Sold Total Cost		Inventory on Hand Quantity	Inventory on Hand Unit Cost	Inventory on Hand Total Cost	
Jun. 1								10 units	× $ 50	= $ 500	$ 500
3				8 units	× $ 50	= $ 400	$ 400	2 units	× $ 50	= $ 100	$ 100
16	10 units	× $ 56	= $ 560					2 units 10 units	× $ 50 × $ 56	= $ 100 = $ 560	$ 660
23				8 units	× $ 56	= $ 448	$ 448	2 units 2 units	× $ 50 × $ 56	= $ 100 = $ 112	$ 212
Totals	10 units		$ 560	16 units			$ 848	4 units			$ 212

Weighted-Average:

Date	Purchases Quantity	Purchases Unit Cost	Purchases Total Cost	Cost of Goods Sold Quantity	Cost of Goods Sold Unit Cost	Cost of Goods Sold Total Cost	Inventory on Hand Quantity	Inventory on Hand Unit Cost	Inventory on Hand Total Cost	
Jun. 1							10 units	× $ 50	= $ 500	
3				8 units	× $ 50	= $ 400	2 units	× $ 50	= $ 100	
16	10 units	× $ 56	= $ 560				12 units	× $ 55	= $ 660	$ 660 / 12 units = $ 55
23				8 units	× $ 55	= $ 440	4 units	× $ 55	= $ 220	
Totals	10 units		$ 560	16 units		$ 840	4 units		$ 220	

2. Journal entries:

FIFO:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	436	
	Merchandise Inventory		436

LIFO:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	448	
	Merchandise Inventory		448

Weighted-average:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	440	
	Merchandise Inventory		440

3. Gross profit:

	FIFO	LIFO	Weighted-Average
Net Sales Revenue ($800 + $800)	$ 1,600	$ 1,600	$ 1,600
Less: Cost of Goods Sold ($400 + $436)	836		
($400 + $448)		848	
($400 + $440)			840
Gross Profit	$ 764	$ 752	$ 760

4. FIFO maximizes net income.
   LIFO minimizes income taxes.

> Key Terms

Conservatism (p. 328)
Consistency Principle (p. 327)
Cost of Goods Available for Sale (p. 332)
Days' Sales in Inventory (p. 346)
Disclosure Principle (p. 327)
First-In, First-Out (FIFO) Method (p. 332)
Inventory Costing Method (p. 331)
Inventory Turnover (p. 346)
Last-In, First-Out (LIFO) Method (p. 333)
Lower-of-Cost-or-Market (LCM) Rule (p. 341)
Materiality Concept (p. 328)
Specific Identification Method (p. 331)
Weighted-Average Method (p. 335)

> Quick Check

Learning Objective 1

1. Which principle or concept states that businesses should use the same accounting methods and procedures from period to period?

a. Disclosure **b.** Conservatism **c.** Consistency **d.** Materiality

Learning Objective 2

2. Which inventory costing method assigns to ending merchandise inventory the newest—the most recent—costs incurred during the period?

a. First-in, first-out (FIFO)
b. Weighted-average
c. Specific identification
d. Last-in, first-out (LIFO)

Learning Objective 2

3. Assume Nile.com began April with 14 units of inventory that cost a total of $266. During April, Nile.com purchased and sold goods as follows:

Apr. 8	Purchase	42 units @ $ 20
14	Sale	35 units @ $ 40
22	Purchase	28 units @ $ 22
27	Sale	42 units @ $ 40

Under the FIFO inventory costing method and the perpetual inventory system, how much is Nile.com's cost of goods sold for the sale on April 14?

a. $1,106 **b.** $686 **c.** $1,400 **d.** $700

Learning Objective 2

4. Suppose Nile.com used the weighted-average inventory costing method and the perpetual inventory system. Use the Nile.com data in Question 3 to compute the weighted-average unit cost of the company's inventory on hand at April 8. Round weighted-average unit cost to the nearest cent.

a. $21.00
b. $19.75
c. $19.50
d. Cannot be determined from the data given

Learning Objective 3

5. Which inventory costing method results in the lowest net income during a period of rising inventory costs?

a. Weighted-average
b. Specific identification
c. First-in, first-out (FIFO)
d. Last-in, first-out (LIFO)

Learning Objective 4

6. Which of the following is most closely linked to accounting conservatism?

a. Lower-of-cost-or-market rule
b. Materiality concept
c. Disclosure principle
d. Consistency principle

Learning Objective 5

7. At December 31, 2018, Stevenson Company overstated ending inventory by $36,000. How does this error affect cost of goods sold and net income for 2018?

a. Overstates cost of goods sold and understates net income
b. Understates cost of goods sold and overstates net income
c. Leaves both cost of goods sold and net income correct because the errors cancel each other
d. Overstates both cost of goods sold and net income

8. Suppose Maestro's had cost of goods sold during the year of $230,000. Beginning merchandise inventory was $35,000, and ending merchandise inventory was $45,000. Determine Maestro's inventory turnover for the year. Round to the nearest hundredth.

Learning Objective 6

a. 6.57 times per year
b. 5.75 times per year
c. 5.11 times per year
d. 17.39 times per year

9A. Suppose Nile.com used the LIFO inventory costing method and the periodic inventory system. Use the Nile.com data in Question 3 to determine Nile.com's cost of goods sold at the end of the month.

Learning Objective 7 Appendix 6A

a. $1,568
b. $133
c. $1,589
d. $154

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. Which principle states that businesses should use the same accounting methods and procedures from period to period?
2. What does the disclosure principle require?
3. Discuss the materiality concept. Is the dollar amount that is material the same for a company that has annual sales of $10,000 compared with a company that has annual sales of $1,000,000?
4. What is the goal of conservatism?
5. Discuss some measures that should be taken to maintain control over merchandise inventory.
6. Under a perpetual inventory system, what are the four inventory costing methods and how does each method determine ending merchandise inventory and cost of goods sold?
7. When using a perpetual inventory system and the weighted-average inventory costing method, when does the business compute a new weighted-average cost per unit?
8. During periods of rising costs, which inventory costing method produces the highest gross profit?
9. What does the lower-of-cost-or-market (LCM) rule require?
10. What account is debited when recording the adjusting entry to write down merchandise inventory under the LCM rule?
11. What is the effect on cost of goods sold, gross profit, and net income if ending merchandise inventory is understated?
12. When does an inventory error cancel out, and why?
13. How is inventory turnover calculated, and what does it measure?
14. How is days' sales in inventory calculated, and what does it measure?

15A. When using the periodic inventory system, which inventory costing method(s) always produces the same result as when using the perpetual inventory system?

16A. When using the periodic inventory system and weighted-average inventory costing method, when is the weighted-average cost per unit computed?

> Short Exercises

For all short exercises, assume the perpetual inventory system is used unless stated otherwise.

Learning Objective 1

S6-1 Determining inventory accounting principles

Ward Hardware used the FIFO inventory costing method in 2018. Ward plans to continue using the FIFO method in future years. Which accounting principle is most relevant to Ward's decision?

Learning Objective 2

S6-2 Determining inventory costing methods

Ward Hardware does not expect costs to change dramatically and wants to use an inventory costing method that averages cost changes.

Requirements

1. Which inventory costing method would best meet Ward's goal?
2. Assume Ward wanted to expense out the newer purchases of goods instead. Which inventory costing method would best meet that need?

Use the following information to answer Short Exercises S6-3 through S6-6.

Boston Cycles started October with 12 bicycles that cost \$42 each. On October 16, Boston bought 40 bicycles at \$68 each. On October 31, Boston sold 34 bicycles for \$100 each.

Learning Objective 2

S6-3 Preparing a perpetual inventory record and journal entries—Specific identification

Requirements

1. Prepare Boston Cycle's perpetual inventory record assuming the company uses the specific identification inventory costing method. Assume that Boston sold 10 bicycles that cost \$42 each and 24 bicycles that cost \$68 each.
2. Journalize the October 16 purchase of merchandise inventory on account and the October 31 sale of merchandise inventory on account.

Learning Objective 2

S6-4 Preparing a perpetual inventory record and journal entries—FIFO

Requirements

1. Prepare Boston Cycle's perpetual inventory record assuming the company uses the FIFO inventory costing method.
2. Journalize the October 16 purchase of merchandise inventory on account and the October 31 sale of merchandise inventory on account.

Learning Objective 2

S6-5 Preparing a perpetual inventory record and journal entries—LIFO

Requirements

1. Prepare Boston Cycle's perpetual inventory record assuming the company uses the LIFO inventory costing method.
2. Journalize the October 16 purchase of merchandise inventory on account and the October 31 sale of merchandise inventory on account.

S6-6 Preparing a perpetual inventory record and journal entries—Weighted-average

Learning Objective 2

Requirements

1. Prepare Boston Cycle's perpetual inventory record assuming the company uses the weighted-average inventory costing method.
2. Journalize the October 16 purchase of merchandise inventory on account and the October 31 sale of merchandise inventory on account.

Note: Short Exercises S6-4, S6-5, and S6-6 must be completed before attempting Short Exercise S6-7.

S6-7 Comparing Cost of Goods Sold under FIFO, LIFO, and Weighted-average

Learning Objective 3

Refer to Short Exercises S6-4 through S6-6. After completing those exercises, answer the following questions:

Requirements

1. Which inventory costing method produced the lowest cost of goods sold?
2. Which inventory costing method produced the highest cost of goods sold?
3. If costs had been declining instead of rising, which inventory costing method would have produced the highest cost of goods sold?

S6-8 Applying the lower-of-cost-or-market rule

Learning Objective 4

Assume that a Logan Burger restaurant has the following perpetual inventory record for hamburger patties:

Date	Purchases	Cost of Goods Sold	Merchandise Inventory on Hand
Jul. 9	$ 450		$ 450
22		$ 270	180
31	210		390

At July 31, the accountant for the restaurant determines that the current replacement cost of the ending merchandise inventory is $435. Make any adjusting entry needed to apply the lower-of-cost-or-market rule. Merchandise inventory would be reported on the balance sheet at what value on July 31?

S6-9 Determining the effect of an inventory error

Learning Objective 5

New York Pool Supplies's merchandise inventory data for the year ended December 31, 2019, follow:

Net Sales Revenue		$ 58,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 4,900	
Net Cost of Purchases	32,500	
Cost of Goods Available for Sale	37,400	
Less: Ending Merchandise Inventory	4,700	
Cost of Goods Sold		32,700
Gross Profit		$ 25,300

Requirements

1. Assume that the ending merchandise inventory was accidentally overstated by $1,800. What are the correct amounts for cost of goods sold and gross profit?
2. How would the inventory error affect New York Pool Supplies's cost of goods sold and gross profit for the year ended December 31, 2020, if the error is not corrected in 2019?

Learning Objective 6

S6-10 Computing the rate of inventory turnover and days' sales in inventory

Broadway Communications reported the following figures in its annual financial statements:

Cost of Goods Sold	$ 18,400
Beginning Merchandise Inventory	560
Ending Merchandise Inventory	450

Compute the rate of inventory turnover and days' sales in inventory for Broadway Communications. (Round to two decimal places.)

Use the following information to answer Short Exercises S6A-11 through S6A-13.

The periodic inventory records of Flexon Prosthetics indicate the following for the month of July:

Jul. 1	Beginning merchandise inventory	6 units @ $ 60 each
8	Purchase	5 units @ $ 67 each
15	Purchase	10 units @ $ 70 each
26	Purchase	5 units @ $ 85 each

At July 31, Flexon counts four units of merchandise inventory on hand.

Learning Objective 7
Appendix 6A

S6A-11 Computing periodic inventory amounts—FIFO

Compute ending merchandise inventory and cost of goods sold for Flexon using the FIFO inventory costing method.

Learning Objective 7
Appendix 6A

S6A-12 Computing periodic inventory amounts—LIFO

Compute ending merchandise inventory and cost of goods sold for Flexon using the LIFO inventory costing method.

Learning Objective 7
Appendix 6A

S6A-13 Computing periodic inventory amounts—Weighted-average

Compute ending merchandise inventory and cost of goods sold for Flexon using the weighted-average inventory costing method.

> Exercises

For all exercises, assume the perpetual inventory system is used unless stated otherwise.

E6-14 Using accounting vocabulary

Learning Objectives 1, 2

Match the accounting terms with the corresponding definitions.

1. Specific identification
2. Materiality concept
3. Last-in, first-out (LIFO)
4. Conservatism
5. Consistency principle
6. Weighted-average
7. Disclosure principle
8. First-in, first-out (FIFO)

a. Treats the oldest inventory purchases as the first units sold.
b. Requires that a company report enough information for outsiders to make knowledgeable decisions.
c. Identifies exactly which inventory item was sold. Usually used for higher cost inventory.
d. Calculates a weighted-average cost based on the cost of goods available for sale and the number of units available.
e. Principle whose foundation is to exercise caution in reporting financial statement items.
f. Treats the most recent/newest purchases as the first units sold.
g. Businesses should use the same accounting methods from period to period.
h. Principle that states significant items must conform to GAAP.

E6-15 Comparing inventory methods

Learning Objective 2

1. Ending Merch. Inv. $16.30

Super Mart, a regional convenience store chain, maintains milk inventory by the gallon. The first month's milk purchases and sales at its Freeport, Florida, location follow:

Nov. 2	Purchased 11 gallons @ $2.15 each
6	Purchased 2 gallons @ $2.80 each
8	Sold 6 gallons of milk to a customer
13	Purchased 3 gallons @ $2.85 each
14	Sold 4 gallons of milk to a customer

Requirements

1. Determine the amount that would be reported in ending merchandise inventory on November 15 using the FIFO inventory costing method.

2. Determine the amount that would be reported in ending merchandise inventory on November 15 using the LIFO inventory costing method.

3. Determine the amount that would be reported in ending merchandise inventory on November 15 using the weighted-average inventory costing method. Round all amounts to the nearest cent.

Use the following information to answer Exercises E6-16 through E6-18.

Golf Unlimited carries an inventory of putters and other golf clubs. The sales price of each putter is $119. Company records indicate the following for a particular line of Golf Unlimited's putters:

Date	Item	Quantity	Unit Cost
Nov. 1	Balance	24	$ 53
6	Sale	20	
8	Purchase	30	70
17	Sale	30	
30	Sale	2	

Learning Objective 2

1. COGS $3,232

E6-16 Measuring and journalizing merchandise inventory and cost of goods sold—FIFO

Requirements

1. Prepare a perpetual inventory record for the putters assuming Golf Unlimited uses the FIFO inventory costing method. Then identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Golf Unlimited's inventory transactions using the FIFO inventory costing method. (Assume purchases and sales are made on account.)

Learning Objective 2

1. Ending Merch. Inv. $106

E6-17 Measuring ending inventory and cost of goods sold in a perpetual inventory system—LIFO

Requirements

1. Prepare Golf Unlimited's perpetual inventory record for the putters assuming Golf Unlimited uses the LIFO inventory costing method. Then identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Golf Unlimiteds inventory transactions using the LIFO inventory costing method. (Assume purchases and sales are made on account.)

Learning Objective 2

1. COGS $3,236

E6-18 Measuring ending inventory and cost of goods sold in a perpetual inventory system—Weighted-average

Requirements

1. Prepare Golf Unlimited's perpetual inventory record for the putters assuming Golf Unlimited uses the weighted-average inventory costing method. Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar. Then identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Golf Unlimited's inventory transactions using the weighted-average inventory costing method. (Assume purchases and sales are made on account.)

E6-19 Comparing amounts for cost of goods sold, ending inventory, and gross profit—FIFO and LIFO

Learning Objectives 2, 3

2. Ending Merch. Inv. $73

Assume that Toys Galore store bought and sold a line of dolls during December as follows:

Dec. 1	Beginning merchandise inventory	13 units @ $ 9 each
8	Sale	8 units @ $ 22 each
14	Purchase	16 units @ $ 14 each
21	Sale	14 units @ $ 22 each

Requirements

1. Compute the cost of goods sold, cost of ending merchandise inventory, and gross profit using the FIFO inventory costing method.
2. Compute the cost of goods sold, cost of ending merchandise inventory, and gross profit using the LIFO inventory costing method.
3. Which method results in a higher cost of goods sold?
4. Which method results in a higher cost of ending merchandise inventory?
5. Which method results in a higher gross profit?

E6-20 Comparing cost of goods sold and gross profit—FIFO, LIFO, and weighted-average methods

Learning Objectives 2, 3

1. COGS $2,140

Assume that AB Tire Store completed the following perpetual inventory transactions for a line of tires:

May 1	Beginning merchandise inventory	16 tires @ $ 65 each
11	Purchase	10 tires @ $ 78 each
23	Sale	12 tires @ $ 88 each
26	Purchase	14 tires @ $ 80 each
29	Sale	18 tires @ $ 88 each

Requirements

1. Compute cost of goods sold and gross profit using the FIFO inventory costing method.
2. Compute cost of goods sold and gross profit using the LIFO inventory costing method.
3. Compute cost of goods sold and gross profit using the weighted-average inventory costing method. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. Which method results in the largest gross profit, and why?

Learning Objective 4

E6-21 Applying the lower-of-cost-or-market rule to merchandise inventories

Clarmont Resources, which uses the FIFO inventory costing method, has the following account balances at May 31, 2019, prior to releasing the financial statements for the year:

Merchandise Inventory, ending	$ 13,500
Cost of Goods Sold	68,000
Net Sales Revenue	123,000

Clarmont has determined that the current replacement cost (current market value) of the May 31, 2019, ending merchandise inventory is $12,400.

Requirements

1. Prepare any adjusting journal entry required from the information given.
2. What value would Clarmont report on the balance sheet at May 31, 2019, for merchandise inventory?

Learning Objective 4

2. GP $66,500

E6-22 Applying the lower-of-cost-or-market rule to inventories

Nutriset Foods reports merchandise inventory at the lower-of-cost-or-market. Prior to releasing its financial statements for the year ended March 31, 2019, Nutriset's *preliminary* income statement, before the year-end adjustments, appears as follows:

NUTRISET FOODS Income Statement (Partial) Year Ended March 31, 2019	
Net Sales Revenue	$ 118,000
Cost of Goods Sold	47,000
Gross Profit	$ 71,000

Nutriset has determined that the current replacement cost of ending merchandise inventory is $19,500. Cost is $24,000.

Requirements

1. Journalize the adjusting entry for merchandise inventory, if any is required.
2. Prepare a revised partial income statement to show how Nutriset Foods should report sales, cost of goods sold, and gross profit.

Learning Objective 5

b. Correct GP $19,000

E6-23 Measuring the effect of an inventory error

Hot Bread Bakery reported Net sales revenue of $44,000 and cost of goods sold of $33,000. Compute Hot Bread's correct gross profit if the company made either of the following independent accounting errors. Show your work.

a. Ending merchandise inventory is overstated by $8,000.

b. Ending merchandise inventory is understated by $8,000.

E6-24 Correcting an inventory error—two years

Learning Objective 5

1. 2019, NI $36,500

Nature Foods Grocery reported the following comparative income statements for the years ended June 30, 2019 and 2018:

NATURE FOODS GROCERY
Income Statements
Years Ended June 30, 2019 and 2018

	2019		2018	
Net Sales Revenue		$ 134,000		$ 119,000
Cost of Goods Sold:				
Beginning Merchandise Inventory	$ 17,000		$ 14,000	
Net Cost of Purchases	78,000		67,000	
Cost of Goods Available for Sale	95,000		81,000	
Less: Ending Merchandise Inventory	18,000		17,000	
Cost of Goods Sold		77,000		64,000
Gross Profit		57,000		55,000
Operating Expenses		26,000		21,000
Net Income		$ 31,000		$ 34,000

During 2019, Nature Foods Grocery discovered that ending 2018 merchandise inventory was overstated by $5,500.

Requirements

1. Prepare corrected income statements for the two years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.

E6-25 Computing inventory turnover and days' sales in inventory

Learning Objective 6

Calm Day reported the following income statement for the year ended December 31, 2019:

CALM DAY
Income Statement
Year Ended December 31, 2019

Net Sales Revenue		$ 128,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 9,000	
Net Cost of Purchases	62,000	
Cost of Goods Available for Sale	71,000	
Less: Ending Merchandise Inventory	12,200	
Cost of Goods Sold		58,800
Gross Profit		69,200
Operating Expenses		41,600
Net Income		$ 27,600

Requirements

1. Compute Calm Day's inventory turnover rate for the year. (Round to two decimal places.)
2. Compute Calm Day's days' sales in inventory for the year. (Round to two decimal places.)

Learning Objective 7
Appendix 6A

2. COGS $513

E6A-26 Comparing ending merchandise inventory, cost of goods sold, and gross profit using the periodic inventory system—FIFO, LIFO, and weighted-average methods

Assume that Jump Coffee Shop completed the following *periodic* inventory transactions for a line of merchandise inventory:

Jun. 1	Beginning merchandise inventory	17 units @ $ 15 each
12	Purchase	5 units @ $ 19 each
20	Sale	14 units @ $ 37 each
24	Purchase	11 units @ $ 23 each
29	Sale	13 units @ $ 37 each

Requirements

1. Compute ending merchandise inventory, cost of goods sold, and gross profit using the FIFO inventory costing method.
2. Compute ending merchandise inventory, cost of goods sold, and gross profit using the LIFO inventory costing method.
3. Compute ending merchandise inventory, cost of goods sold, and gross profit using the weighted-average inventory costing method. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)

Learning Objective 7
Appendix 6A

E6A-27 Computing periodic inventory amounts

Consider the data of the following companies which use the periodic inventory system:

Company	Net Sales Revenue	Beginning Merchandise Inventory	Net Cost of Purchases	Ending Merchandise Inventory	Cost of Goods Sold	Gross Profit
Large	$ 105,000	$ 23,000	$ 59,000	$ 22,000	$ (a)	$ 45,000
Small	(b)	27,000	94,000	(c)	99,000	40,000
Medium	96,000	(d)	58,000	24,000	68,000	(e)
Petite	80,000	8,000	(f)	6,500	(g)	44,000

Requirements

1. Supply the missing amounts in the preceding table.
2. Prepare the income statement for the year ended December 31, 2019, for Large Company, which uses the periodic inventory system. Include a complete heading, and show the full computation of cost of goods sold. Large's operating expenses for the year were $12,000.

CHAPTER 6

Problems Group A

For all problems, assume the perpetual inventory system is used unless stated otherwise.

P6-28A Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average

Learning Objectives 2, 3

2. Ending Merch. Inv., $990

Fit Gym began January with merchandise inventory of 78 crates of vitamins that cost a total of $4,290. During the month, Fit Gym purchased and sold merchandise on account as follows:

Jan. 5	Purchase	156 crates @ $ 64 each
13	Sale	180 crates @ $ 100 each
18	Purchase	114 crates @ $ 75 each
26	Sale	150 crates @ $ 116 each

Requirements

1. Prepare a perpetual inventory record, using the FIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
2. Prepare a perpetual inventory record, using the LIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
3. Prepare a perpetual inventory record, using the weighted-average inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. If the business wanted to pay the least amount of income taxes possible, which method would it choose?

P6-29A Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Learning Objectives 2, 3

5. FIFO GP $5,235

Steel Mill began August with 50 units of iron inventory that cost $35 each. During August, the company completed the following inventory transactions:

		Units	Unit Cost	Unit Sales Price
Aug. 3	Sale	45		$ 85
8	Purchase	90	$ 54	
21	Sale	85		88
30	Purchase	15	58	

Requirements

1. Prepare a perpetual inventory record for the merchandise inventory using the FIFO inventory costing method.
2. Prepare a perpetual inventory record for the merchandise inventory using the LIFO inventory costing method.

CHAPTER 6

3. Prepare a perpetual inventory record for the merchandise inventory using the weighted-average inventory costing method.
4. Determine the company's cost of goods sold for August using FIFO, LIFO, and weighted-average inventory costing methods.
5. Compute gross profit for August using FIFO, LIFO, and weighted-average inventory costing methods.
6. If the business wanted to maximize gross profit, which method would it select?

Learning Objectives 1, 4

P6-30A Accounting principles for inventory and applying the lower-of-cost-or-market rule

Some of M and C Electronics's merchandise is gathering dust. It is now December 31, 2018, and the current replacement cost of the ending merchandise inventory is $24,000 below the business's cost of the goods, which was $97,000. Before any adjustments at the end of the period, the company's Cost of Goods Sold account has a balance of $380,000.

Requirements

1. Journalize any required entries.
2. At what amount should the company report merchandise inventory on the balance sheet?
3. At what amount should the company report cost of goods sold on the income statement?
4. Which accounting principle or concept is most relevant to this situation?

Learning Objectives 5, 6

2. 2019, overstated $9,000

P6-31A Correcting inventory errors over a three-year period and computing inventory turnover and days' sales in inventory

Empire State Carpets's books show the following data. In early 2020, auditors found that the ending merchandise inventory for 2017 was understated by $8,000 and that the ending merchandise inventory for 2019 was overstated by $9,000. The ending merchandise inventory at December 31, 2018, was correct.

	2019		2018		2017	
Net Sales Revenue		$ 220,000		$ 162,000		$ 176,000
Cost of Goods Sold:						
Beginning Merchandise Inventory	$ 22,000		$ 29,000		$ 46,000	
Net Cost of Purchases	132,000		90,000		76,000	
Cost of Goods Available for Sale	154,000		119,000		122,000	
Less: Ending Merchandise Inventory	32,000		22,000		29,000	
Cost of Goods Sold		122,000		97,000		93,000
Gross Profit		98,000		65,000		83,000
Operating Expenses		72,000		38,000		48,000
Net Income		$ 26,000		$ 27,000		$ 35,000

CHAPTER 6

Requirements

1. Prepare corrected income statements for the three years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.
3. Compute the inventory turnover and days' sales in inventory using the corrected income statements for the three years. (Round all numbers to two decimals.)

P6A-32A Accounting for inventory using the periodic inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Learning Objectives 2, 3, 7 Appendix 6A

1. LIFO Ending Merch. Inv., $6,680

Futuristic Electronic Center began October with 65 units of merchandise inventory that cost $82 each. During October, the store made the following purchases:

Oct. 3	25 units @ $ 90 each
12	30 units @ $ 90 each
18	35 units @ $ 96 each

Futuristic uses the periodic inventory system, and the physical count at October 31 indicates that 80 units of merchandise inventory are on hand.

Requirements

1. Determine the ending merchandise inventory and cost of goods sold amounts for the October financial statements using the FIFO, LIFO, and weighted-average inventory costing methods.
2. Net sales revenue for October totaled $28,000. Compute Futuristic's gross profit for October using each method.
3. Which method will result in the lowest income taxes for Futuristic? Why? Which method will result in the highest net income for Futuristic? Why?

> Problems Group B

For all problems, assume the perpetual inventory system is used unless stated otherwise.

P6-33B Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average

Learning Objectives 2, 3

2. Ending Merch. Inv., $4,550

Exercise World began January with merchandise inventory of 90 crates of vitamins that cost a total of $5,850. During the month, Exercise World purchased and sold merchandise on account as follows:

Jan. 2	Purchase	130 crates @ $ 76 each
5	Sale	140 crates @ $ 100 each
16	Purchase	170 crates @ $ 86 each
27	Sale	180 crates @ $ 104 each

Requirements

1. Prepare a perpetual inventory record, using the FIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
2. Prepare a perpetual inventory record, using the LIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
3. Prepare a perpetual inventory record, using the weighted-average inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. If the business wanted to pay the least amount of income taxes possible, which method would it choose?

Learning Objectives 2, 3

5. FIFO GP $4,640

P6-34B Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Steel It began January with 55 units of iron inventory that cost $35 each. During January, the company completed the following inventory transactions:

		Units	Unit Cost	Unit Sales Price
Jan. 3	Sale	45		$ 83
8	Purchase	75	$ 52	
21	Sale	70		85
30	Purchase	10	55	

Requirements

1. Prepare a perpetual inventory record for the merchandise inventory using the FIFO inventory costing method.
2. Prepare a perpetual inventory record for the merchandise inventory using the LIFO inventory costing method.
3. Prepare a perpetual inventory record for the merchandise inventory using the weighted-average inventory costing method.
4. Determine the company's cost of goods sold for January using FIFO, LIFO, and weighted-average inventory costing methods.
5. Compute gross profit for January using FIFO, LIFO, and weighted-average inventory costing methods.
6. If the business wanted to maximize gross profit, which method would it select?

P6-35B Accounting principles for inventory and applying the lower-of-cost-or-market rule

Learning Objectives 1, 4

Some of L and K Electronics's merchandise is gathering dust. It is now December 31, 2018, and the current replacement cost of the ending merchandise inventory is $32,000 below the business's cost of the goods, which was $98,000. Before any adjustments at the end of the period, the company's Cost of Goods Sold account has a balance of $410,000.

Requirements

1. Journalize any required entries.
2. At what amount should the company report merchandise inventory on the balance sheet?
3. At what amount should the company report cost of goods sold on the income statement?
4. Which accounting principle or concept is most relevant to this situation?

P6-36B Correcting inventory errors over a three-year period and computing inventory turnover and days' sales in inventory

Learning Objectives 5, 6

2. 2019, overstated $9,000

Antique Carpets's books show the following data. In early 2020, auditors found that the ending merchandise inventory for 2017 was understated by $8,000 and that the ending merchandise inventory for 2019 was overstated by $9,000. The ending merchandise inventory at December 31, 2018, was correct.

	2019		2018		2017	
Net Sales Revenue		$ 212,000		$ 161,000		$ 170,000
Cost of Goods Sold:						
Beginning Merchandise Inventory	$ 22,000		$ 28,000		$ 41,000	
Net Cost of Purchases	131,000		100,000		86,000	
Cost of Goods Available for Sale	153,000		128,000		127,000	
Less: Ending Merchandise Inventory	34,000		22,000		28,000	
Cost of Goods Sold		119,000		106,000		99,000
Gross Profit		93,000		55,000		71,000
Operating Expenses		63,000		28,000		39,000
Net Income		$ 30,000		$ 27,000		$ 32,000

Requirements

1. Prepare corrected income statements for the three years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.
3. Compute the inventory turnover and days' sales in inventory using the corrected income statements for the three years. (Round all numbers to two decimals.)

CHAPTER 6

Learning Objectives 2, 3, 7
Appendix 6A

1. LIFO Ending Merch. Inv., $9,460

P6A-37B Accounting for inventory using the periodic inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Right Now Electronic Center began October with 100 units of merchandise inventory that cost $70 each. During October, the store made the following purchases:

Oct. 3	35 units @ $ 82 each
12	45 units @ $ 84 each
18	75 units @ $ 90 each

Right Now uses the periodic inventory system, and the physical count at October 31 indicates that 130 units of merchandise inventory are on hand.

Requirements

1. Determine the ending merchandise inventory and cost of goods sold amounts for the October financial statements using the FIFO, LIFO, and weighted-average inventory costing methods.
2. Net sales revenue for October totaled $26,000. Compute Right Now's gross profit for October using each method.
3. Which method will result in the lowest income taxes for Right Now? Why? Which method will result in the highest net income for Right Now? Why?

CRITICAL THINKING

> Using Excel

P6-38 Using Excel for Inventory Cost Flow Assumptions.

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Johnson Company uses a perpetual inventory system. The January 2018 inventory information is as follows. Assume cash purchases and sales.

Date	Description	Units	Per Unit
Jan 1	Inventory on hand	1,000	$ 4
3	Purchase	3,000	5
6	Sale	2,750	10
15	Purchase	5,000	6
22	Sale	4,500	10

Requirements

1. Prepare a perpetual inventory record using FIFO, LIFO, and weighted-average inventory costing methods, and determine cost of goods sold and ending merchandise inventory. Use cell references from Data table for quantities and unit cost. Use Excel formulas for total costs and total quantities. Format weighted-average unit costs and total costs to display two decimal places.
2. Journalize Johnson Company's inventory transactions under each of the three methods.

> Continuing Problem

P6-39 Accounting for inventory using the perpetual inventory system—FIFO

This problem continues the Canyon Canoe Company situation from Chapter 5. At the beginning of the January 2019, Canyon Canoe Company decided to carry and sell T-shirts with its logo printed on them. Canyon Canoe Company uses the perpetual inventory system to account for the inventory. During February 2019, Canyon Canoe Company completed the following merchandising transactions:

Feb. 2	Sold 60 T-shirts at $10 each.
5	Purchased 50 T-shirts at $6 each.
7	Sold 45 T-shirts for $10 each.
8	Sold 20 T-shirts for $10 each.
10	Canyon Canoe Company realized the inventory was running low, so it placed a rush order and purchased 20 T-shirts. The premium cost for these shirts was $7 each.
12	Placed a second rush order and purchased 40 T-shirts at $7 each.
13	Sold 20 T-shirts for $10 each.
15	Purchased 50 T-shirts for $6 each.
20	In order to avoid future rush orders, purchased 150 T-shirts. Due to the volume of the order, Canyon Canoe Company was able to negotiate a cost of $5 each.
21	Sold 40 T-shirts for $10 each.
22	Sold 35 T-shirts for $10 each.
24	Sold 20 T-shirts for $10 each.
25	Sold 45 T-shirts for $10 each.
27	Sold 40 T-shirts for $10 each.

Requirements

1. Assume Canton Canoe Company began February with 94 T-shirts in inventory that cost $5 each. Prepare the perpetual inventory records for February using the FIFO inventory costing method.
2. Provide a summary for the month, in both units and dollars, of the change in inventory in the following format:

	Number of T-shirts	Dollar Amount
Beginning Balance		
Add: Purchases		
Less: Cost of Goods Sold		
Ending Balance		

CHAPTER 6

> Practice Set

P6-40 Accounting for inventory using the perpetual inventory system—FIFO

This problem continues the Crystal Clear Cleaning problem begun in Chapter 2 and continued through Chapter 5.

Consider the December transactions for Crystal Clear Cleaning that were presented in Chapter 5. (Cost data have been removed from the sale transactions.) Crystal Clear uses the perpetual inventory system.

Dec. 2	Purchased 1,000 units of inventory for $4,000 on account from Sparkle Company on terms, 5/10, n/20.
5	Purchased 1,200 units of inventory from Borax on account with terms 4/10, n/30. The total invoice was for $6,000, which included a $300 freight charge.
7	Returned 300 units of inventory to Sparkle from the December 2 purchase.
9	Paid Borax.
11	Sold 500 units of goods to Happy Maids for $5,500 on account with terms n/30.
12	Paid Sparkle.
15	Received 100 units with a sales price of $1,100 of goods back from customer Happy Maids.
21	Received payment from Happy Maids, settling the amount due in full.
28	Sold 500 units of goods to Bridget, Inc. on account for $6,500. Terms 1/15, n/30.
29	Paid cash for utilities of $550.
30	Paid cash for Sales Commission Expense of $214.
31	Received payment from Bridget, Inc., less discount.
31	Recorded the following adjusting entries:

a. Physical count of inventory on December 31 showed 800 units of goods on hand.

b. Depreciation, $150.

c. Accrued salaries expense of $2,100.

d. Estimated sales returns of $1,500, with cost of $540.

e. Prepared all other adjustments necessary for December (Hint: You will need to review the adjustment information in Chapter 3 to determine the remaining adjustments). Assume the cleaning supplies left at December 31 are $50.

Requirements

1. Prepare perpetual inventory records for December for Crystal Clear Cleaning using the FIFO inventory costing method. (Note: You must calculate the cost of goods sold on the 11th, 28th, and 31st (adjusting entry a).) Round per unit costs to two decimal places.
2. Journalize the transactions for December 11th, 28th, and 31st (adjusting entry a only) using the perpetual inventory record created in Requirement 1.

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Chapters 5 and 6

The Davis Lamp Company (DLC) is a wholesale company that purchases lamps from the manufacturer and resells them to retail stores. The company has three inventory items: desk lamps, table lamps, and floor lamps. DLC uses a perpetual inventory system, FIFO method. DCL owns land with a building, which is separated into two parts: office space and warehouse space. All expenses associated with the office are categorized as Administrative Expenses. All expenses associated with the warehouse, which is used for the shipping and receiving functions of the company, are categorized as Selling Expenses. In addition to the land and building, DLC also owns office furniture and equipment and warehouse fixtures. The company uses one accumulated depreciation account for all the depreciable assets.

The trial balance for DLC as of September 30, 2018 follows:

DAVIS LAMP COMPANY
Trial Balance
September 30, 2018

	Balance	
Account	**Debit**	**Credit**
Cash	$ 457,000	
Accounts Receivable	0	
Merchandise Inventory	126,000	
Office Supplies	275	
Warehouse Supplies	350	
Land	20,000	
Building	780,000	
Office Furniture and Equipment	125,000	
Warehouse Fixtures	260,000	
Accumulated Depreciation		$ 194,000
Accounts Payable		0
Common Stock		100,000
Retained Earnings		298,925
Dividends	0	
Sales Revenue		2,654,150
Cost of Goods Sold	1,061,450	
Salaries Expense—Selling	270,000	
Utilities Expense—Selling	32,000	
Supplies Expense—Selling	0	
Depreciation Expense—Selling	0	
Salaries Expense—Administrative	90,000	
Utilities Expense—Administrative	25,000	
Supplies Expense—Administrative	0	
Depreciation Expense—Administrative	0	
Total	$ 3,247,075	$ 3,247,075

CHAPTER 6

Merchandise Inventory as of September 30 consists of the following lamps:

Item	Quantity	Unit Cost	Total Cost
Desk Lamp	2,500	$ 8	$ 20,000
Table Lamp	3,000	18	54,000
Floor Lamp	2,000	26	52,000
Total			$ 126,000

During the fourth quarter of 2018, DLC completed the following transactions:

Oct. 1	Purchased lamps on account from Blue Ridge Lights, terms n/30, FOB destination: 5,000 desk lamps at $9 each 7,500 table lamps at $19 each 2,500 floor lamps at $25 each
12	Sold lamps on account to Atlas Home Furnishings, terms 2/10, n/30: 4,000 table lamps at $45 each
15	Sold lamps on account to Hiawassee Office Supply, terms 2/10, n/30: 1,000 desk lamps at $20 each
20	Received a check from Atlas Home Furnishings for full amount owed on Oct. 12 sale.
23	Received a check from Hiawassee Office Supply for full amount owed on Oct. 15 sale.
28	Sold lamps on account to Parkway Home Stores, terms 2/10, n/30: 3,500 table lamps at $45 each 1,500 floor lamps at $65 each
30	Paid amount due to Blue Ridge Lights from Oct. 1 purchase.
31	Paid salaries, $40,000 (75% selling, 25% administrative).
31	Paid utilities, $2,500 (60% selling, 40% administrative).
Nov. 1	Sold lamps on account to Hiawassee Office Supply, terms 2/10, n/30: 3,000 desk lamps at $20 each
5	Purchased lamps on account from Blue Ridge Lights, terms n/30, FOB destination: 5,000 desk lamps at $10 each 10,000 table lamps at $21 each 5,000 floor lamps at $27 each
5	Received a check from Parkway Home Stores for full amount owed on Oct. 28 sale.
8	Received a check from Hiawassee Office Supply for full amount owed on Nov. 1 sale.
10	Purchased and paid for supplies: $325 for the office; $675 for the warehouse.
15	Sold lamps on account to Anderson Office Supply, n/30: 2,000 desk lamps at $20 each
18	Sold lamps on account to Go-Mart Discount Stores, terms 1/10, n/30: 2,000 table lamps at $45 each 2,000 floor lamps at $65 each
28	Received a check from Go-Mart Discount Stores for full amount owed on Nov. 18 sale.

30	Paid salaries, $40,000 (75% selling, 25% administrative).
30	Paid utilities, $2,670 (60% selling, 40% administrative).
Dec. 5	Paid amount due to Blue Ridge Lights from Nov. 5 purchase.
15	Received a check from Anderson Office Supply for full amount owed on Nov. 15 sale.
15	Paid dividends, $50,000.
27	Sold lamps on account to Atlas Home Furnishings, terms 2/10, n/30: 4,500 desk lamps at $20 each 5,000 table lamps at $45 each
31	Paid salaries, $40,000 (75% selling, 25% administrative).
31	Paid utilities, $3,200 (60% selling, 40% administrative).

Requirements

1. Open general ledger T-accounts and enter opening balances as of September 30, 2018.
2. Open inventory records for the three inventory items and enter opening balances as of September 30, 2018. Complete the inventory records using the following transactions: Oct. 1, 12, 15, 28; Nov. 1, 5, 15, 18, and Dec. 27.
3. Record the transactions in the general journal.
4. Post transactions to the general ledger.
5. Prepare adjusting entries for the year ended December 31, 2018, and post to the ledger:
   a. Depreciation, $48,500 (75% selling, 25% administrative).
   b. Supplies on hand: office, $200; and warehouse, $650.
   c. A physical inventory account resulted in the following counts: desk lamps, 1,990; table lamps, 5,995; and floor lamps, 6,000. Update the inventory records.
6. Prepare an adjusted trial balance.
7. Provide a summary for the month, in both units and dollars, of the change in inventory for each item in the following format:

	Desk Lamps		Table Lamps		Floor Lamps	
	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount
Beginning Balance						
Add: Purchases						
Less: COGS						
Ending Balance						

   Does the sum of the ending balances in the inventory records match the balance in Merchandise Inventory in the general ledger? If not, review the transactions to find your error.
8. Prepare Davis Lamp Company's multi-step income statement and statement of retained earnings for the year ended December 31, 2018, and a classified balance sheet as of December 31, 2018.

CHAPTER 6

9. Calculate the following ratios for DLC as of December 31, 2018: gross profit percentage, inventory turnover, and days' sales in inventory.
10. Record and post the closing entries.
11. Prepare a post-closing trial balance.

> Tying It All Together Case 6-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Dick's Sporting Goods, Inc.'s 2015 annual report (https://www.sec.gov/Archives/edgar/data/1089063/000108906316000107/dks-10k_20160130.htm).

Dick's Sporting Goods, Inc. is headquartered in Pennsylvania and is a leading sporting goods retailer. Dick's offers a variety of high-quality sports equipment, apparel, footwear and accessories. The company sells inventory in their stores (Dick's Sporting Goods, Golf Galaxy, Field & Stream, and True Runner) and online through their Web site.

Requirements

1. On which financial statement would you find Merchandise Inventory? What was the amount of merchandise inventory as of January 30, 2016 and January 31, 2015?
2. On which financial statement would you find Cost of Goods Sold? What does Cost of Goods Sold represent?
3. How could you determine the amount of profit that Dick's Sporting Goods earns when selling its merchandise inventory? What is this amount for the year ending January 30, 2016?

> Decision Case 6-1

Suppose you manage Campbell Appliance. The store's summarized financial statements for 2019, the most recent year, follow:

CAMPBELL APPLIANCE Income Statement Year Ended December 31, 2019	
Net Sales Revenue	$ 800,000
Cost of Goods Sold	660,000
Gross Profit	140,000
Operating Expenses	100,000
Net Income	$ 40,000

CAMPBELL APPLIANCE Balance Sheet December 31, 2019			
Assets		**Liabilities and Stockholders' Equity**	
Cash	$ 30,000	Accounts Payable	$ 35,000
Inventories	75,000	Note Payable	280,000
Land and Buildings, Net	360,000	Total Liabilities	315,000
		Stockholders' Equity	150,000
Total Assets	$ 465,000	Total Liabilities and Stockholders' Equity	$ 465,000

CHAPTER 6

Assume that you need to double net income. To accomplish your goal, it will be very difficult to raise the sales prices you charge because there is a discount appliance store nearby. Also, you have little control over your cost of goods sold because the appliance manufacturers set the amount you must pay.

Identify several strategies for doubling net income.

> Financial Statement Case 6-1

The notes are an important part of a company's financial statements, giving valuable details that would clutter the tabular data presented in the statements. This case will help you learn to use a company's inventory notes. Visit **http://www.pearsonhighered.com/Horngren** to view a link to **Target Corporation's** fiscal year ended January 31, 2016, Annual Report. Access the financial statements and related notes, and answer the following questions:

Requirements

1. Which inventory costing method does Target use? How does Target value its inventories? See Note 12.
2. By using the cost of goods sold formula, you can compute net purchases, which are not reported in the Target financial statements. How much were Target's inventory purchases during the year ended January 30, 2016?
3. Determine Target's inventory turnover and days' sales in inventory for the year ended January 30, 2016. (Round each ratio to one decimal place.) How do Target's inventory turnover and days' sales in inventory compare with **Kohl's Corporation's** for the year ended January 30, 2016? Explain.

> Team Project 6-1

Obtain the annual reports of as many companies as you have team members—one company per team member. Most companies post their financial statements on their Web sites.

Requirements

1. Identify the inventory method used by each company.
2. Compute each company's gross profit percentage, inventory turnover, and days' sales in inventory for the most recent two years.
3. For the industries of the companies you are analyzing, obtain the industry averages for gross profit percentage and inventory turnover from Risk Management Association, *Annual Statement Studies*; Dun and Bradstreet, *Industry Norms and Key Business Ratios*; or Leo Troy, *Almanac of Business and Industrial Financial Ratios*.
4. How well does each of your companies compare with the average for its industry? What insight about your companies can you glean from these ratios?

> Quick Check Answers

1. c **2.** a **3.** b **4.** b **5.** d **6.** a **7.** b **8.** b **9A.** c

Chapter 6
Merchandise Inventory

Review Questions

1. The consistency principle states that businesses should use the same accounting methods and procedures from period to period.

2. The disclosure principle requires that a company must report enough information in its financial statements for outsiders to make knowledgeable decisions about the company.

3. The materiality concept states that a company must perform strictly proper accounting only for significant items. Information is significant—or, in accounting terms, material—when it would cause someone to change a decision. The amount that is material for a company with annual sales of $10,000 is not the same as the amount that is material for a company with annual sales of $1,000,000. For example, $1,000 is 10% of $10,000 but is only 0.1% of $1,000,000. Thus, $1,000 is material for a company with annual sales of $10,000 but not for a company with annual sales of $1,000,000.

4. Conservatism in accounting means exercising caution in reporting items in the financial statements. A company should report the least favorable figures in the financial statements when two or more possible options are presented. The goal of conservatism is to report realistic figures and to never overstate assets or net income.

5. Maintaining goods controls over merchandise inventory is very important for a merchandiser. Good controls ensure that inventory purchases and sales are properly authorized and accounted for by the accounting system. This can be accomplished by taking the following measures:

- Ensure merchandise inventory is not purchased without proper authorization, including purchasing only from approved vendors and within acceptable dollar ranges.
- After inventory is purchased, the order should be tracked and properly documented when received. At time of delivery, a count of inventory received should be completed and each item should be examined for damage.
- Damaged inventory should be properly recorded and then should be used, disposed of, or returned to the vendor.
- A physical count of inventory should be completed once a year to track inventory shrinkage due to theft, damage, and errors.
- When sales are made, the inventory sold should be properly recorded and removed from the inventory count. This will reduce the likelihood of stockouts.

6. The four inventory costing methods are specific identification, FIFO (First-In, First-Out), LIFO (Last-In, First-Out), and weighted-average. The specific identification method uses the specific cost of each unit of inventory to determine cost of goods sold and ending merchandise inventory. The FIFO method assumes that the first costs into merchandise inventory are the first costs out to cost of goods sold. Ending merchandise inventory is based on the costs of the most recent purchases. The LIFO method assumes that the last costs into merchandise inventory are the first costs out to cost of goods sold. This method leaves the oldest costs—those of beginning inventory and the earliest purchases of the period—in ending merchandise inventory. The weighted-average method is based on the weighted average cost of inventory that is calculated after each purchase of inventory. After each purchase, weighted average cost per unit is determined by dividing the cost of goods available for sale by the number of units available. When using a perpetual inventory system and the weighted-average inventory costing method, a new weighted average cost per unit is computed after each purchase. Cost of goods sold and ending merchandise inventory are based on the same weighted average cost per unit.

7. When using a perpetual inventory system and the weighted-average inventory costing method, a new weighted average cost per unit is computed after each purchase.

8. During periods of rising costs, the FIFO inventory costing method produces the highest gross profit.

9. The lower-of-cost-or-market (LCM) rule requires that merchandise inventory be reported in the financial statements at the lower of its historical cost or market value. For merchandise inventory, market value generally means current replacement cost (the cost to replace the inventory on hand).

10. In the adjusting entry to write down merchandise inventory, Cost of Goods Sold is debited (and Merchandise Inventory is credited).

11. If ending merchandise inventory is understated, cost of goods sold is overstated, gross profit is understated, and net income is understated.

12. One period's ending merchandise inventory becomes the next period's beginning merchandise inventory. As a result, an error in ending merchandise inventory carries over into the next period. Ending merchandise inventory is subtracted from the cost of goods available for sale in one period and the same amount is added as beginning merchandise inventory in the next period. Therefore, an inventory error cancels out after two periods.

13. Inventory turnover measures how rapidly merchandise inventory is sold during a period (the number of times a company sells its average level of merchandise inventory during a period). Inventory turnover = Cost of goods sold / Average merchandise inventory, where Average merchandise inventory = (Beginning merchandise inventory + Ending merchandise inventory) / 2.

14. Days' sales in inventory measures the average number of days merchandise inventory is held by a company. Days' sales in inventory = 365 days / Inventory turnover.

15A. When using a periodic inventory system, the specific identification and FIFO inventory costing methods produce the same results as when using a perpetual inventory system.

16A. When using the periodic inventory system and weighted-average inventory costing method, the weighted average cost per unit is computed at the end of the period (a single weighted average cost per unit is computed for the entire period).

Short Exercises

S6-1

The consistency principle is most relevant to Ward's decision.

S6-2
Requirement 1

The weighted-average inventory costing method would best meet Ward's goal.

Requirement 2

The LIFO inventory costing method would best meet that need.

S6-3
Requirement 1

Perpetual Inventory Record: Specific Identification

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Oct. 1								12 units	× $ 42	= $ 504	$ 504
16	40 units	× $ 68	= $ 2,720					12 units 40 units	× $ 42 × $ 68	= $ 504 = $ 2,720	$ 3,224
31				10 units 24 units	× $ 42 × $ 68	= $ 420 = $ 1,632	$ 2,052	2 units 16 units	× $ 42 × $ 68	= $ 84 = $ 1,088	$ 1,172
Totals	40 units		$ 2,720	34 units			$ 2,052	18 units			$ 1,172

S6-3, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 16	Merchandise Inventory	2,720	
	Accounts Payable		2,720
	Purchased inventory on account.		
31	Accounts Receivable	3,400 [a]	
	Sales Revenue		3,400 [a]
	Sale on account.		
31	Cost of Goods Sold	2,052 [b]	
	Merchandise Inventory		2,052 [b]
	Recorded the cost of goods sold.		

Calculations:

[a] Total sales revenue = Number of bicycles sold × Sales price per bicycle
= 34 bicycles x \$100 per bicycle
= \$3,400

[b] Calculated in Requirement 1.

S6-4
Requirement 1

Perpetual Inventory Record: FIFO

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Oct. 1							12 units	× $ 42	= $ 504 } $ 504
16	40 units	× $ 68	= $ 2,720				12 units 40 units	× $ 42 × $ 68	= $ 504 = $ 2,720 } $ 3,224
31				12 units 22 units	× $ 42 × $ 68	= $ 504 = $ 1,496 } $ 2,000	18 units	× $ 68	= $ 1,224 } $ 1,224
Totals	40 units		$ 2,720	34 units		$ 2,000	18 units		$ 1,224

S6-4, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 16	Merchandise Inventory	2,720	
	Accounts Payable		2,720
	Purchased inventory on account.		
31	Accounts Receivable	3,400 [a]	
	Sales Revenue		3,400 [a]
	Sale on account.		
31	Cost of Goods Sold	2,000 [b]	
	Merchandise Inventory		2,000 [b]
	Recorded the cost of goods sold.		

Calculations:

[a] Total sales revenue = Number of bicycles sold x Sales price per bicycle
= 34 bicycles x $100 per bicycle
= $3,400

[b] Calculated in Requirement 1.

S6-5
Requirement 1

Perpetual Inventory Record: LIFO

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Oct. 1								12 units	× $ 42	= $ 504	$ 504
16	40 units	× $ 68	= $ 2,720					12 units 40 units	× $ 42 × $ 68	= $ 504 = $ 2,720	$ 3,224
31				34 units	× $ 68	= $ 2,312	$ 2,312	12 units 6 units	× $ 42 × $ 68	= $ 504 = $ 408	$ 912
Totals	40 units		$ 2,720	34 units			$ 2,312	18 units			$ 912

S6-5, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 16	Merchandise Inventory	2,720	
	Accounts Payable		2,720
	Purchased inventory on account.		
31	Accounts Receivable	3,400 [a]	
	Sales Revenue		3,400 [a]
	Sale on account.		
31	Cost of Goods Sold	2,312[b]	
	Merchandise Inventory		2,312[b]
	Recorded the cost of goods sold.		

Calculations:

[a] Total sales revenue = Number of bicycles sold x Sales price per bicycle
= 34 bicycles x $100 per bicycle
= $3,400

[b] Calculated in Requirement 1.

S6-6
Requirement 1

Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Oct. 1							12 units	× $ 42	= $ 504
16	40 units	× $ 68	= $ 2,720				52 units	× $ 62 [(a)]	= $ 3,224
31				34 units	× $ 62	= $ 2,108	18 units	× $ 62	= $ 1,116
Totals	40 units		$ 2,720	34 units		$ 2,108	18 units		$ 1,116

Calculations:

(a) Weighted average cost per unit = Cost of goods available for sale / Number of units available
= ($504 + $2,720) / (12 units + 40 units)
= $3,224 / 52 units
= $62 per unit

S6-6, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 16	Merchandise Inventory	2,720	
	Accounts Payable		2,720
	Purchased inventory on account.		
31	Accounts Receivable	3,400 [b]	
	Sales Revenue		3,400 [b]
	Sale on account.		
31	Cost of Goods Sold	2,108 [c]	
	Merchandise Inventory		2,108 [c]
	Recorded the cost of goods sold.		

Calculations:

[b] Total sales revenue = Number of bicycles sold × Sales price per bicycle
= 34 bicycles × $100 per bicycle
= $3,400

[c] Calculated in Requirement 1.

S6-7
Requirement 1

The FIFO inventory costing method produced the lowest Cost of Goods Sold.

Requirement 2

The LIFO inventory costing method produced the highest Cost of Goods Sold.

Requirement 3

The FIFO inventory costing method would have produced the highest Cost of Goods Sold if costs had been declining instead of rising.

S6-8

No adjusting entry is needed because the current replacement cost (market value) is higher than the recorded cost of ending merchandise inventory. Thus, merchandise inventory should be reported on the balance sheet at its recorded cost of $390.

S6-9
Requirement 1

For the year ended December 31, 2019, the correct amounts for cost of goods sold and gross profit are $34,500 and $23,500, respectively.

Calculations:

If ending inventory is overstated by $1,800,
then cost of goods sold is understated by $1,800.

$ 32,700	Incorrect cost of goods sold
1,800	Understatement
$ 34,500	Correct cost of goods sold

If cost of goods sold is understated by $1,800,
then gross profit is overstated by $1,800.

$ 25,300	Incorrect gross profit
(1,800)	Overstatement
$ 23,500	Correct gross profit

This can be proved as follows:

Sales Revenue		$ 58,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 4,900	
Net Cost of Purchases	32,500	
Cost of Goods Available for Sale	37,400	
Less: Ending Merchandise Inventory ($4,700 − $1,800)	2,900	
Cost of Goods Sold		34,500
Gross Profit		$ 23,500

Requirement 2

Ending merchandise inventory on December 31, 2019 is the same as beginning merchandise inventory on January 1, 2020. Thus, if ending merchandise inventory on December 31, 2019 is overstated by $1,800, beginning merchandise inventory on January 1, 2020 is also overstated by $1,800.

Effects for the year ended December 31, 2020: If beginning inventory is overstated by $1,800, then cost of goods sold is overstated by $1,800 and gross profit is understated by $1,800.

S6-10

Inventory turnover is 36.44 times and days' sales in inventory is 10.02 days.

Calculations:

Average merchandise inventory	=	(Beginning merchandise inventory + Ending merchandise inventory) / 2
	=	($560 + $450) / 2
	=	$505

Inventory turnover	=	Cost of goods sold / Average merchandise inventory
	=	$18,400 / $505
	=	36.44 times per year

Days' sales in inventory	=	365 days / Inventory turnover
	=	365 days / 36.44 times
	=	10.02 days

S6A-11

Using FIFO, ending merchandise inventory is $340 and cost of goods sold is $1,480.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
Jul. 1	6 units	× $ 60	= $ 360
8	5 units	× $ 67	= $ 335
15	10 units	× $ 70	= $ 700
26	5 units	× $ 85	= $ 425
Totals	26 units		$ 1,820

Ending Merchandise Inventory = 4 units × $85 per unit

= $340

Cost of Goods Sold:

Cost of Goods Available for Sale	$ 1,820
Ending Merchandise Inventory	(340)
Cost of Goods Sold	$ 1,480

Alternatively, Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	6 units	× $ 60	= $ 360
	5 units	× $ 67	= $ 335
	10 units	× $ 70	= $ 700
	1 units	× $ 85	= $ 85
Totals	22 units		$ 1,480

S6A-12

Using LIFO, ending merchandise inventory is $240 and cost of goods sold is $1,580.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
Jul. 1	6 units	× $ 60	= $ 360
8	5 units	× $ 67	= $ 335
15	10 units	× $ 70	= $ 700
26	5 units	× $ 85	= $ 425
Totals	26 units		$ 1,820

Ending Merchandise Inventory = 4 units × $60 per unit
= $240

Cost of Goods Sold:

Cost of Goods Available for Sale	$ 1,820
Ending Merchandise Inventory	(240)
Cost of Goods Sold	$ 1,580

Alternatively, Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	5 units	× $ 85	= $ 425
	10 units	× $ 70	= $ 700
	5 units	× $ 67	= $ 335
	2 units	× $ 60	= $ 120
Totals	22 units		$ 1,580

S6A-13

Using weighted-average, ending merchandise inventory is $280 and cost of goods sold is $1,540.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
Jul. 1	6 units	× $ 60	= $ 360
8	5 units	× $ 67	= $ 335
15	10 units	× $ 70	= $ 700
26	5 units	× $ 85	= $ 425
Totals	26 units		$ 1,820

Weighted-Average cost per unit = $1,820 cost of goods available for sale / 26 units available for sale

= $70 per unit

Ending Merchandise Inventory:

= 4 units × $70 per unit

= $280

Cost of Goods Sold:

Cost of Goods Available for Sale	$ 1,820
Ending Merchandise Inventory	(280)
Cost of Goods Sold	$ 1,540

Alternatively, Cost of Goods Sold:

= 22 units sold × $70 per unit

= $1,540

Exercises

E6-14

1. c
2. h
3. f
4. e
5. g
6. d
7. b
8. a

E6-15
Requirement 1

Ending merchandise inventory on November 15 is $16.30 using FIFO.

Calculations:

FIFO

	Purchases			Cost of Goods Sold				Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Nov. 2	11 units	× $ 2.15	= $ 23.65					11 units	× $ 2.15	= $ 23.65	$ 23.65
6	2 units	× $ 2.80	= $ 5.60					11 units 2 units	× $ 2.15 × $ 2.80	= $ 23.65 = $ 5.60	$ 29.25
8				6 units	× $ 2.15	= $ 12.90	$ 12.90	5 units 2 units	× $ 2.15 × $ 2.80	= $ 10.75 = $ 5.60	$ 16.35
13	3 units	× $ 2.85	= $ 8.55					5 units 2 units 3 units	× $ 2.15 × $ 2.80 × $ 2.85	= $ 10.75 = $ 5.60 = $ 8.55	$ 24.90
14				4 units	× $ 2.15	= $ 8.60	$ 8.60	1 units 2 units 3 units	× $ 2.15 ×$ 2.80 ×$ 2.85	= $ 2.15 = $ 5.60 = $ 8.55	$ 16.30
Totals	16 units		$ 37.80	10 units			$ 21.50	6 units			$ 16.30

E6-15, cont.
Requirement 2

Ending merchandise inventory on November 15 is $12.90 using LIFO.

Calculations:

LIFO

Date	Purchases			Cost of Goods Sold				Inventory on Hand			
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Nov. 2	11 units	× $ 2.15	= $ 23.65					11 units	× $ 2.15	= $ 23.65	$ 23.65
6	2 units	× $ 2.80	= $ 5.60					11 units 2 units	× $ 2.15 × $ 2.80	= $ 23.65 = $ 5.60	$ 29.25
8				2 units 4 units	× $ 2.80 × $ 2.15	= $ 5.60 = $ 8.60	$ 14.20	7 units	× $ 2.15	= $ 15.05	$ 15.05
13	3 units	× $ 2.85	= $ 8.55					7 units 3 units	× $ 2.15 × $ 2.85	= $ 15.05 = $ 8.55	$ 23.60
14				3 units 1 units	× $ 2.85 × $ 2.15	= $ 8.55 = $ 2.15	$ 10.70	6 units	× $ 2.15	= $ 12.90	$ 12.90
Totals	16 units		$ 37.80	10 units			$ 24.90	6 units			$ 12.90

E6-15, cont.
Requirement 3

Ending merchandise inventory on November 15 is $14.58 using weighted-average.

Calculations:

Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Nov. 2	11 units	× $ 2.15	= $ 23.65				11 units	× $ 2.15	= $ 23.65
6	2 units	× $ 2.80	= $ 5.60				13 units	× $ 2.25[a]	= $ 29.25
8				6 units	× $ 2.25	= $ 13.50	7 units	× $ 2.25	= $ 15.75
13	3 units	× $ 2.85	= $ 8.55				10 units	× $ 2.43[b]	= $ 24.30
14				4 units	× $ 2.43	= $ 9.72	6 units	× $ 2.43	= $ 14.58
Totals	16 units		$ 37.80	10 units		$ 23.22	6 units		$ 14.58

Weighted average cost per unit = Cost of goods available for sale / Number of units available

[a] After the Nov. 6 purchase: = ($23.65 + $5.60) / (11 units + 2 units)
= $29.25 / 13 units
= $2.25 per unit

[b] After the Nov. 13 purchase: = ($15.75 + $8.55) / (7 units + 3 units)
= $24.30 / 10 units
= $2.43 per unit

E6-16
Requirement 1

Perpetual Inventory Record: FIFO

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Nov. 1							24 units	× $ 53	= $ 1,272 } $ 1,272
6				20 units	× $ 53	= $ 1,060 } $ 1,060	4 units	× $ 53	= $ 212 } $ 212
8	30 units	× $ 70	= $ 2,100				4 units 30 units	× $ 53 × $ 70	= $ 212 = $ 2,100 } $ 2,312
17				4 units 26 units	× $ 53 × $ 70	= $ 212 = $ 1,820 } $ 2,032	4 units	× $ 70	= $ 280 } $ 280
30				2 units	× $ 70	= $ 140 } $ 140	2 units	× $ 70	= $ 140 } $ 140
Totals	30 units		$ 2,100	52 units		$ 3,232	2 units		$ 140

Using FIFO, the cost of ending merchandise inventory is $140 and cost of goods sold is $3,232.

E6-16, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Nov. 6	Accounts Receivable	2,380 [(a)]	
	Sales Revenue		2,380 [(a)]
	Sale on account.		
6	Cost of Goods Sold	1,060 [(d)]	
	Merchandise Inventory		1,060 [(d)]
	Recorded the cost of goods sold.		
8	Merchandise Inventory	2,100	
	Accounts Payable		2,100
	Purchased inventory on account.		
17	Accounts Receivable	3,570 [(b)]	
	Sales Revenue		3,570 [(b)]
	Sale on account.		
17	Cost of Goods Sold	2,032 [(d)]	
	Merchandise Inventory		2,032 [(d)]
	Recorded the cost of goods sold.		
30	Accounts Receivable	238 [(c)]	
	Sales Revenue		238 [(c)]
	Sale on account.		
30	Cost of Goods Sold	140 [(d)]	
	Merchandise Inventory		140 [(d)]
	Recorded the cost of goods sold.		

E6-16, cont.
Requirement 2, cont.

Calculations:

Total sales revenue = Number of putters sold × Sales price per putter

[a] Nov. 6 sale:
= 20 putters × $119 per putter
= $2,380

[b] Nov. 17 sale:
= 30 putters × $119 per putter
= $3,570

[c] Nov. 30 sale:
= 2 putters × $119 per putter
= $238

[d] Calculated in Requirement 1.

E6-17
Requirement 1

Perpetual Inventory Record: LIFO

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Nov. 1							24 units	× $ 53	= $ 1,272 } $ 1,272
6				20 units	× $ 53	= $1,060 } $ 1,060	4 units	× $ 53	= $ 212 } $ 212
8	30 units	× $ 70	= $ 2,100				4 units 30 units	× $ 53 × $ 70	= $ 212 = $ 2,100 } $ 2,312
17				30 units	× $ 70	= $ 2,100 } $ 2,100	4 units	× $ 53	= $ 212 } $ 212
30				2 units	× $ 53	= $ 106 } $ 106	2 units	× $ 53	= $ 106 } $ 106
Totals	30 units		$ 2,100	52 units		$ 3,266	2 units		$ 106

Using LIFO, the cost of ending merchandise inventory is $106 and cost of goods sold is $3,266.

E6-17, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Nov. 6	Accounts Receivable	2,380 [(a)]	
	Sales Revenue		2,380 [(a)]
	Sale on account.		
6	Cost of Goods Sold	1,060 [(d)]	
	Merchandise Inventory		1,060 [(d)]
	Recorded the cost of goods sold.		
8	Merchandise Inventory	2,100	
	Accounts Payable		2,100
	Purchased inventory on account.		
17	Accounts Receivable	3,570 [(b)]	
	Sales Revenue		3,570 [(b)]
	Sale on account.		
17	Cost of Goods Sold	2,100 [(d)]	
	Merchandise Inventory		2,100 [(d)]
	Recorded the cost of goods sold.		
30	Accounts Receivable	238 [(c)]	
	Sales Revenue		238 [(c)]
	Sale on account.		
30	Cost of Goods Sold	106 [(d)]	
	Merchandise Inventory		106 [(d)]
	Recorded the cost of goods sold.		

E6-17, cont.
Requirement 2, cont.

Calculations:

Total sales revenue = Number of putters sold × Sales price per putter

[a] Nov. 6 sale:
= 20 putters × $119 per putter
= $2,380

[b] Nov. 17 sale:
= 30 putters × $119 per putter
= $3,570

[c] Nov. 30 sale:
= 2 putters × $119 per putter
= $238

[d] Calculated in Requirement 1.

E6-18
Requirement 1

Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Nov. 1							24 units	× $ 53	= $ 1,272
6				20 units	× $ 53	= $ 1,060	4 units	× $ 53	= $ 212
8	30 units	× $ 70	= $ 2,100				34 units	× $ 68[(a)]	= $ 2,312
17				30 units	× $ 68	= $ 2,040	4 units	× $ 68	= $ 272
30				2 units	× $ 68	= $ 136	2 units	× $ 68	= $ 136
Totals	30 units		$ 2,100	52 units		$ 3,236	5 units		$ 136

Using weighted-average, the cost of ending merchandise inventory is $136 and cost of goods sold is $3,236.

Calculations:

Weighted average cost per unit = Cost of goods available for sale / Number of units available

[(a)] After the Nov. 8 purchase:

= ($212 + $2,100) / (4 units + 30 units)

= $2,312 / 34 units

= $68 per unit

E6-18, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Nov. 6	Accounts Receivable	2,380 [a]	
	Sales Revenue		2,380 [a]
	Sale on account.		
6	Cost of Goods Sold	1,060 [e]	
	Merchandise Inventory		1,060 [e]
	Recorded the cost of goods sold.		
8	Merchandise Inventory	2,100	
	Accounts Payable		2,100
	Purchased inventory on account.		
17	Accounts Receivable	3,570 [b]	
	Sales Revenue		3,570 [b]
	Sale on account.		
17	Cost of Goods Sold	2,040 [e]	
	Merchandise Inventory		2,040 [e]
	Recorded the cost of goods sold.		
30	Accounts Receivable	238 [c]	
	Sales Revenue		238 [c]
	Sale on account.		
30	Cost of Goods Sold	136 [e]	
	Merchandise Inventory		136 [e]
	Recorded the cost of goods sold.		

E6-18, cont.
Requirement 2, cont.

Calculations:

Total sales revenue = Number of putters sold × Sales price per putter

(a) Nov. 6 sale:
= 20 putters × $119 per putter
= $2,380

(b) Nov. 17 sale:
= 30 putters × $119 per putter
= $3,570

(c) Nov. 30 sale:
= 2 putters × $119 per putter
= $238

(e) Calculated in Requirement 1.

E6-19
Requirement 1

Using FIFO, cost of goods sold is $243, ending merchandise inventory is $98, and gross profit is $241.

Calculations:

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Dec. 1							13 units	× $ 9	= $ 117 } $ 117
8				8 units	× $ 9	= $ 72 } $ 72	5 units	× $ 9	= $ 45 } $ 45
14	16 units	× $ 14	= $ 224				5 units 16 units	× $ 9 × $ 14	= $ 45 = $ 224 } $ 269
21				5 units 9 units	× $ 9 × $ 14	= $ 45 = $ 126 } $ 171	7 units	× $ 14	= $ 98 } $ 98
Totals	16 units		$ 224	22 units		$ 243	7 units		$ 98

Sales Revenue [a]	$ 484
Less: Cost of Goods Sold	243
Gross Profit	$ 241

[a] Sales revenue = Number of dolls sold × Sales price per doll
= 22 dolls × $22 per doll
= $484

E6-19, cont.
Requirement 2

Using LIFO, cost of goods sold is $268, ending merchandise inventory is $73, and gross profit is $216.

Calculations:

Date	Purchases			Cost of Goods Sold				Inventory on Hand			
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Dec. 1								13 units	× $ 9	= $ 117	$ 117
8				8 units	× $ 9	= $ 72	$ 72	5 units	× $ 9	= $ 45	$ 45
14	16 units	× $ 14	= $ 224					5 units 16 units	× $ 9 × $ 14	= $ 45 = $ 224	$ 269
21				14 units	× $ 14	= $ 196	$ 196	5 units 2 units	× $ 9 × $ 14	= $ 45 = $ 28	$ 73
Totals	16 units		$ 224	22 units			$ 268	7 units			$ 73

Sales Revenue (b)	$ 484
Less: Cost of Goods Sold	268
Gross Profit	$ 216

(b) Calculated in Requirement 1.

E6-19, cont.
Requirement 3

LIFO results in a higher cost of goods sold.

Requirement 4

FIFO results in a higher cost of ending merchandise inventory.

Requirement 5

FIFO results in a higher gross profit.

E6-20
Requirement 1
Using FIFO, cost of goods sold is $2,140 and gross profit is $500.

Calculations:

Date	Purchases			Cost of Goods Sold				Inventory on Hand			
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
May 1								16 units	× $ 65	= $ 1,040	$ 1,040
11	10 units	× $ 78	= $ 780					16 units 10 units	× $ 65 × $ 78	= $ 1,040 = $ 780	$ 1,820
23				12 units	× $ 65	= $ 780	$ 780	4 units 10 units	× $ 65 × $ 78	= $ 260 = $ 780	$ 1,040
26	14 units	× $ 80	= $ 1,120					4 units 10 units 14 units	× $ 65 × $ 78 × $ 80	= $ 260 = $ 780 = $ 1,120	$ 2,160
29				4 units 10 units 4 units	× $ 65 × $ 78 × $ 80	= $ 260 = $ 780 = $ 320	$ 1,360	10 units	× $ 80	= $ 800	$ 800
Totals	24 units		$ 1,900	30 units			$ 2,140	10 units			$ 800

Sales Revenue [a]	$ 2,640
Less: Cost of Goods Sold	2,140
Gross Profit	$ 500

[a] Sales revenue = Number of tires sold × Sales price per tire
= 30 tires × $88 per tire
= $2,640

E6-20, cont.
Requirement 2

Using LIFO, cost of goods sold is $2,290 and gross profit is $350.

Calculations:

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
May 1							16 units	× $ 65	= $ 1,040 } $ 1,040
11	10 units	× $ 78	= $ 780				16 units 10 units	× $ 65 × $ 78	= $ 1,040 = $ 780 } $ 1,820
23				10 units 2 units	× $ 78 × $ 65	= $ 780 = $ 130 } $ 910	14 units	× $ 65	= $ 910 } $ 910
26	14 units	× $ 80	= $ 1,120				14 units 14 units	× $ 65 × $ 80	= $ 910 =$ 1,120 } $ 2,030
29				14 units 4 units	× $ 80 × $ 65	= $ 1,120 = $ 260 } $ 1,380	10 units	× $ 65	= $ 650 } $ 650
Totals	24 units		$ 1,900	30 units		$ 2,290	10 units		$ 650

Sales Revenue [b]	$ 2,640
Less: Cost of Goods Sold	2,290
Gross Profit	$ 350

[b] Calculated in Requirement 1.

E6-20, cont.
Requirement 3

Using weighted-average, cost of goods sold is $2,190 and gross profit is $450.

Calculations:

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
May 1							16 units	× $ 65	= $ 1,040
11	10 units	× $ 78	= $ 780				26 units	× $ 70 (c)	= $ 1,820
23				12 units	× $ 70	= $ 840	14 units	× $ 70	= $ 980
26	14 units	× $ 80	= $ 1,120				28 units	× $ 75 (d)	= $ 2,100
29				18 units	× $ 75	= $ 1,350	10 units	× $ 75	= $ 750
Totals	24 units		$ 1,900	30 units		$ 2,190	10 units		$ 750

Weighted average cost per unit = Cost of goods available for sale / Number of units available

(c) After the 1st purchase: = ($1,040 + $780) / (16 units + 10 units)
= $1,820 / 26 units
= $70 per unit

(d) After the 2nd purchase: = ($980 + $1,120) / (14 units + 14 units)
= $2,100 / 28 units
= $75 per unit

Sales Revenue (e)	$ 2,640
Less: Cost of Goods Sold	2,190
Gross Profit	$ 450

(e) Calculated in Requirement 1.

E6-20, cont.
Requirement 4

FIFO results in the largest gross profit. Under FIFO, the first costs into inventory are the first costs out to cost of goods sold. Under LIFO, the last costs into inventory are the first costs out to cost of goods sold. When inventory costs are rising, the first costs into inventory are lower than the last costs into inventory. Thus, cost of goods sold is lower and gross profit is higher using FIFO. (The weighted-average method amounts fall somewhere in between FIFO and LIFO amounts because the method is based on the weighted average cost of inventory during the period.)

E6-21
Requirement 1

Date	Accounts and Explanation	Debit	Credit
May 31	Cost of Goods Sold	1,100 *	
	Merchandise Inventory		1,100 *
	To write merchandise inventory down to market value.		

* Calculations:

$ 12,400	Current replacement cost of inventory
(13,500)	Cost of inventory prior to adjustment
$ (1,100)	Adjustment needed

Requirement 2

Merchandise inventory would be reported at $12,400 on the May 31, 2019 balance sheet.

E6-22
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Cost of Goods Sold	4,500 [(a)]	
	Merchandise Inventory		4,500 [(a)]
	To write merchandise inventory down to market value.		

Calculations:

(a)

$ 19,500	Current replacement cost of inventory
(24,000)	Cost of inventory prior to adjustment
$ (4,500)	Adjustment needed

Requirement 2

NUTRISET FOODS
Income Statement (Partial)
Year Ended March 31, 2019

Sales Revenue	$ 118,000
Cost of Goods Sold	51,500 [(b)]
Gross Profit	$ 66,500

Calculations:

(b)

$ 47,000	Cost of Goods Sold prior to adjustment
4,500	Adjustment, Requirement 1
$ 51,500	Cost of Goods Sold, adjusted

E6-23

(a) Correct gross profit is $3,000.

Calculations:

As Reported:

Sales Revenue	$ 44,000
Less: Cost of Goods Sold	41,000*
Gross Profit	$ 3,000

*$33,000 + $8,000 = $41,000

If ending inventory is overstated by $8,000,
then cost of goods sold is understated by $8,000.

And, if cost of goods sold is understated by $8,000,
then gross profit is overstated by $8,000.

$ 11,000*	Incorrect gross profit
(8,000)	Overstatement
$ 3,000	Correct gross profit

*Sales Revenue $44,000 – COGS $33,000 = Gross Profit $11,000

(b) Correct gross profit is $19,000.

Calculations:

If ending inventory is understated by $8,000,
then cost of goods sold is overstated by $8,000.

And, if cost of goods sold is overstated by $8,000,
then gross profit is understated by $8,000.

$ 11,000	Incorrect gross profit*
8,000	Understatement
$ 19,000	Correct gross profit

* Calculated in (a).

E6-24
Requirement 1

Corrected income statements:

NATURE FOODS GROCERY Income Statements Years Ended June 30, 2019 and 2018	2019		2018	
Sales Revenue		$ 134,000		$ 119,000
Cost of Goods Sold:				
Beginning Merchandise Inventory	$ 11,500[a]		$ 14,000	
Net Cost of Purchases	78,000		67,000	
Cost of Goods Available for Sale	89,500		81,000	
Less: Ending Merchandise Inventory	18,000		11,500 [a]	
Cost of Goods Sold		71,500		69,500
Gross Profit		62,500		49,500
Operating Expenses		26,000		21,000
Net Income		$ 36,500		$ 28,500

Calculations:

(a)

$ 17,000	Incorrect Merchandise Inventory
(5,500)	Overstatement
$ 11,500	Correct Merchandise Inventory

E6-24, cont.
Requirement 2

Before correction, net income for the year ended June 30, 2019 is understated by $5,500 and net income for the year ended June 30, 2018 is overstated by $5,500.

Calculations:

	Year Ended June 30, 2019	Year Ended June 30, 2018
Incorrect net income	$ 31,000	$ 34,000
Correct net income [b]	(36,500)	(28,500)
Overstatement (understatement) of net income	$ (5,500)	$ 5,500

[b] Calculated in Requirement 1.

E6-25
Requirement 1

Inventory turnover is 5.55 times for the year.

Calculations:

Average merchandise inventory	=	(Beginning merchandise inventory + Ending merchandise inventory) / 2
	=	($9,000 + $12,200) / 2
	=	$10,600

Inventory turnover	=	Cost of goods sold / Average merchandise inventory
	=	$58,800 / $10,600
	=	5.55 times for the year

Requirement 2

Days' sales in inventory is 65.77 days for the year.

Calculations:

Days' sales in inventory	=	365 days / Inventory turnover
	=	365 days / 5.55 times*
	=	65.77 days

* Calculated in Requirement 1.

E6A-26
Requirement 1

Using FIFO, ending merchandise inventory is $138, cost of goods sold is $465, and gross profit is $534.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
June 1	17 units	× $ 15	= $ 255
12	5 units	× $ 19	= $ 95
24	11 units	× $ 23	= $ 253
Totals	33 units		$ 603

Number of units sold = 14 units for first sale + 13 units for second sale
= 27 units

Sales revenue = 27 units sold × $37 sale price per unit
= $999

Number of units in ending merchandise inventory = 33 units available for sale – 27 units sold
= 6 units

FIFO ending merchandise inventory = 6 units × $23 per unit
= $138

FIFO Cost of Goods Sold:

Cost of Goods Available for Sale	$ 603
Less: Ending Merchandise Inventory	138
Cost of Goods Sold	$ 465

FIFO Gross Profit:

Sales Revenue	$ 999
Less: Cost of Goods Sold	465
Gross Profit	$ 534

E6A-26, cont.
Requirement 2

Using LIFO, ending merchandise inventory is $90, cost of goods sold is $513, and gross profit is $486.

Calculations:

LIFO ending merchandise inventory	=	6 units × $15 per unit
	=	$90

LIFO Cost of Goods Sold:

Cost of Goods Available for Sale[(a)]	$ 603
Less: Ending Merchandise Inventory	90
Cost of Goods Sold	$ 513

LIFO Gross Profit:

Sales Revenue[(a)]	$ 999
Less: Cost of Goods Sold	513
Gross Profit	$ 486

[(a)] Calculated in Requirement 1.

E6A-26, cont.
Requirement 3

Using weighted-average, ending merchandise inventory is \$110, cost of goods sold is \$493, and gross profit is \$506.

Calculations:

Weighted-average cost per unit	=	\$603 cost of goods available for sale / 33 units available for sale
	=	\$18.27 per unit

Weighted-average ending merchandise inventory	=	6 units × \$18.27 per unit
	=	\$110 (rounded)

Weighted-average Cost of Goods Sold:

Cost of Goods Available for Sale[(b)]	\$ 603
Ending Merchandise Inventory	(110)
Cost of Goods Sold	\$ 493

Weighted-average Gross Profit:

Sales Revenue [(b)]	\$ 999
Less: Cost of Goods Sold	493
Gross Profit	\$ 506

[(b)] Calculated in Requirement 1.

E6A-27
Requirement 1

(a) is $60,000; (b) is $139,000; (c) is $22,000; (d) is $34,000; (e) is $28,000; (f) is $34,500; (g) is $36,000.

Calculations:

(a)

Gross Profit = Net Sales Revenue – Cost of Goods Sold

Thus:

Cost of Goods Sold	=	Net Sales Revenue – Gross Profit
	=	$105,000 – $45,000
	=	$60,000

(b)

Gross Profit = Net Sales Revenue – Cost of Goods Sold

Thus:

Net Sales	=	Cost of Goods Sold + Gross Profit
	=	$99,000 + $40,000
	=	$139,000

(c)

Ending Merchandise Inventory	=	Beginning Merchandise Inventory + Net Purchases – Cost of Goods Sold
	=	$27,000 + $94,000 – $99,000
	=	$22,000

E6A-27, cont.
Requirement 1, cont.

(d)

Ending Merchandise Inventory	=	Beginning Merchandise Inventory + Net Purchases – Cost of Goods Sold

Thus:

Beginning Merchandise Inventory	=	Ending Merchandise Inventory – Net Purchases + Cost of Goods Sold
	=	$24,000 – $58,000 + $68,000
	=	$34,000

(e)

Gross Profit	=	Net Sales Revenue – Cost of Goods Sold
	=	$96,000 – $68,000
	=	$28,000

(g) Note: calculate (g) before (f)

Gross Profit = Net Sales Revenue – Cost of Goods Sold

Thus:

Cost of Goods Sold	=	Net Sales Revenue – Gross Profit
	=	$80,000 – $44,000
	=	$36,000

E6A-27, cont.
Requirement 1, cont.

(f)

Ending Merchandise Inventory	=	Beginning Merchandise Inventory + Net Purchases – Cost of Goods Sold

Thus:

Net Purchases	=	Ending Merchandise Inventory – Beginning Merchandise Inventory + Cost of Goods Sold
	=	$6,500 – $8,000 + $36,000*
	=	$34,500

* Calculated as (g), above.

Requirement 2

LARGE COMPANY
Income Statement
Year Ended December 31, 2019

Net Sales Revenue		$ 105,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	$ 23,000	
Net Cost of Purchases	59,000	
Cost of Goods Available for Sale	82,000	
Less: Ending Merchandise Inventory	22,000	
Cost of Goods Sold		60,000
Gross Profit		45,000
Operating Expenses		12,000
Net Income		$ 33,000

Problems (Group A)

P6-28A

Requirement 1

Using FIFO, cost of goods sold is $21,474, ending merchandise inventory is $1,350, and gross profit is $13,926.

Perpetual Inventory Record: FIFO

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jan. 1							78 units	× $ 55 (a)	= $ 4,290 $ 4,290
5	156 units	× $ 64	= $ 9,984				78 units 156 units	× $ 55 × $ 64	= $ 4,290 = $ 9,984 $ 14,274
13				78 units 102 units	× $ 55 × $ 64	= $ 4,290 = $ 6,528 $ 10,818	54 units	× $ 64	= $ 3,456 $ 3,456
18	114 units	× $ 75	= $ 8,550				54 units 114 units	× $ 64 × $ 75	= $ 3,456 = $ 8,550 $ 12,006
26				54 units 96 units	× $ 64 × $ 75	= $ 3,456 = $ 7,200 $ 10,656	18 units	× $ 75	= $ 1,350 $ 1,350
Totals	270 units		$ 18,534	330 units		$ 21,474	18 units		$ 1,350

P6-28A, cont.
Requirement 1, cont.

Calculations:

[a] Jan. 1 inventory unit cost = Total cost / Total number of units
= $4,290 / 78 units
= $55 per unit

Sales revenue = Number of crates sold × Sales price per crate

Sale 1:
= 180 crates × $100 per crate
= $18,000

Sale 2:
= 150 crates × $116 per crate
= $17,400

Total sales revenue = Sales revenue from Sale 1 + Sales revenue from Sale 2
= $18,000 + $17,400
= $35,400

Total Sales Revenue	$ 35,400
Cost of Goods Sold	(21,474)
Gross Profit	$ 13,926

P6-28A, cont.
Requirement 2

Using LIFO, cost of goods sold is $21,834, ending merchandise inventory is $990, and gross profit is $13,566.

Perpetual Inventory Record: LIFO

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Jan. 1								78 units	× $ 55 [b]	= $ 4,290	$ 4,290
5	156 units	× $ 64	= $ 9,984					78 units 156 units	× $ 55 × $ 64	= $ 4,290 = $ 9,984	$ 14,274
13				156 units 24 units	× $ 64 × $ 55	= $ 9,984 = $ 1,320	$ 11,304	54 units	× $ 55	= $ 2,970	$ 2,970
18	114 units	× $ 75	= $ 8,550					54 units 114 units	× $ 55 × $ 75	= $ 2,970 = $ 8,550	$11,520
26				114 units 36 units	× $ 75 × $ 55	= $ 8,550 = $ 1,980	$ 10,530	18 units	× $ 55	= $ 990	$ 990
Totals	270 units		$ 18,534	330 units			$ 21,834	18 units			$ 990

[b] Calculated in Requirement 1.

Total Sales Revenue[c]	$ 35,400
Cost of Goods Sold	(21,834)
Gross Profit	$ 13,566

[c] Calculated in Requirement 1.

P6-28A, cont.
Requirement 3

Using weighted-average, cost of goods sold is $21,555, ending merchandise inventory is $1,269, and gross profit is $13,845.

Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jan. 1							78 units	× $ 55.00 [d]	= $ 4,290
5	156 units	× $ 64	= $ 9,984				234 units	× $ 61.00 [e]	= $ 14,274
13				180 units	× $61.00	= $ 10,980	54 units	× $ 61.00	= $ 3,294
18	114 units	× $ 75	= $ 8,550				168 units	× $ 70.50 [f]	= $ 11,844
26				150 units	× $70.50	= $ 10,575	18 units	× $ 70.50	= $ 1,269
Totals	270 units		$ 18,534	330 units		$ 21,555	18 units		$ 1,269

[d] Calculated in Requirement 1.

Weighted average cost per unit = Cost of goods available for sale / Number of units available

[e] After Purchase 1:

= ($4,290 + $9,984) / (78 units + 156 units)

= $14,274 / 234 units

= $61.00 per unit

[f] After Purchase 2:

= ($3,294 + $8,550) ÷ (54 units + 114 units)

= $11,844 / 168 units

= $70.50 per unit

P6-28A, cont.
Requirement 3, cont.

Total Sales Revenue[g]	$ 35,400
Cost of Goods Sold	(21,555)
Gross Profit	$ 13,845

[g] Calculated in Requirement 1.

Requirement 4

If the business wanted to pay the least amount of income taxes possible, they would choose LIFO.

P6-29A
Requirement 1

Perpetual Inventory Record: FIFO

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							50 units	× $ 35	= $ 1,750 } $ 1,750
3				45 units	× $ 35	= $ 1,575 } $ 1,575	5 units	× $ 35	= $ 175 } $ 175
8	90 units	× $ 54	= $ 4,860				5 units 90 units	× $ 35 × $ 54	= $ 175 = $ 4,860 } $ 5,035
21				5 units 80 units	× $ 35 × $ 54	= $ 175 = $ 4,320 } $ 4,495	10 units	× $ 54	= $ 540 } $ 540
30	15 units	× $ 58	= $ 870				10 units 15 units	× $ 54 × $ 58	= $ 540 = $ 870 } $ 1,410
Totals	105 units		$ 5,730	130 units		$ 6,070	25 units		$ 1,410

P6-29A, cont.
Requirement 2

Perpetual Inventory Record: LIFO

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Aug. 1								50 units	× $ 35	= $ 1,750	$ 1,750
3				45 units	× $ 35	= $ 1,575	$ 1,575	5 units	× $ 35	= $ 175	$ 175
8	90 units	× $ 54	= $ 4,860					5 units 90 units	× $ 35 × $ 54	= $ 175 = $ 4,860	$ 5,035
21				85 units	× $ 54	= $ 4,590	$ 4,590	5 units 5 units	× $ 35 × $ 54	= $ 175 = $ 270	$ 445
30	15 units	× $ 58	= $ 870					5 units 5 units 15 units	× $ 35 × $ 54 × $ 58	= $ 175 = $ 270 = $ 870	$ 1,315
Totals	105 units		$ 5,730	130 units			$ 6,165	25 units			$ 1,315

P6-29A, cont.
Requirement 3

Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							50 units	× $ 35	= $ 1,750
3				45 units	× $35	= $ 1,575	5 units	× $ 35	= $ 175
8	90 units	× $ 54	= $ 4,860				95 units	× $ 53 (a)	= $ 5,035
21				85 units	× $53	= $ 4,505	10 units	× $ 53	= $ 530
30	15 units	× $ 58	= $ 870				25 units	× $ 56 (b)	= $ 1,400
Totals	105 units		$ 5,730	130 units		$ 6,080	25 units		$ 1,400

Calculations:

Weighted average cost per unit = Cost of goods available for sale / Number of units available

(a) After the Aug. 8 purchase:

= ($175 + $4,860) / (5 units + 90 units)

= $5,035 / 95 units

= $53 per unit

(b) After the Aug. 30 purchase:

= ($530 + $870) / (10 units + 15 units)

= $1,400 / 25 units

= $56 per unit

P6-29A, cont.
Requirement 4

Cost of goods sold is $6,070 using FIFO, $6,165 using LIFO, and $6,080 using weighted-average. (Amounts calculated in Requirements 1, 2, and 3, respectively.)

Requirement 5

Gross profit is $5,235 using FIFO, $5,140 using LIFO, and $5,225 using weighted-average.

Calculations:

Sales revenue = Number of units sold × Sales price per unit

Aug. 3 sale:
= 45 units × $85 per unit
= $3,825

Aug. 21 sale:
= 85 units × $88 per unit
= $7,480

Total sales revenue = Sales revenue from Aug. 3 sale + Sales revenue from Aug. 21 sale
= $3,825 + $7,480
= $11,305

	FIFO	LIFO	Weighted-Average
Total Sales Revenue	$ 11,305	$ 11,305	$ 11,305
Cost of Goods Sold	(6,070)	(6,165)	(6,080)
Gross Profit	$ 5,235	$ 5,140	$ 5,225

Requirement 6

If the business wanted to maximize gross profit they would select FIFO.

P6-30A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold	24,000	
	Merchandise Inventory		24,000
	To write merchandise inventory down to market value.		

Requirement 2

Merchandise inventory should be reported at $73,000 on the balance sheet.

Calculations:

$ 97,000	Merchandise inventory prior to adjustment
(24,000)	Adjustment
$ 73,000	Merchandise inventory, adjusted

Requirement 3

Cost of goods sold should be reported at $404,000 on the income statement.

Calculations:

$ 380,000	Cost of goods sold prior to adjustment
24,000	Adjustment
$ 404,000	Cost of goods sold, adjusted

Requirement 4

The conservatism principle is most relevant to this situation.

P6-31A
Requirement 1

Corrected income statements:

EMPIRE STATE CARPETS Income Statements Years Ended December 31, 2019, 2018, and 2017						
	2019		2018		2017	
Net Sales Revenue		$ 220,000		$ 162,000		$ 176,000
Cost of Goods Sold:						
Beginning Merchandise Inventory	$ 22,000		$ 37,000[b]		$ 46,000	
Net Cost of Purchases	132,000		90,000		76,000	
Cost of Goods Available for Sale	154,000		127,000		122,000	
Less: Ending Merchandise Inventory	23,000[a]		22,000		37,000[b]	
Cost of Goods Sold		131,000		105,000		85,000
Gross Profit		89,000		57,000		91,000
Operating Expenses		72,000		38,000		48,000
Net Income		$ 17,000		$ 19,000		$ 43,000

Calculations:

	December 31 2019	 2017
Incorrect Merchandise Inventory	$ 32,000	$ 29,000
Understatement (Overstatement)	(9,000)	8,000
Correct Merchandise Inventory	$ 23,000[a]	$ 37,000[b]

P6-31A, cont.
Requirement 2

Before correction, net income is overstated by $9,000 in 2019, overstated by $8,000 in 2018, and understated by $8,000 in 2017.

Calculations:

	2019	2018	2017
Correct Net Income[c]	$ 17,000	$ 19,000	$ 43,000
Incorrect Net Income	(26,000)	(27,000)	(35,000)
Understatement (Overstatement)	$ (9,000)	$ (8,000)	$ 8,000

[c] Calculated in Requirement 1.

Requirement 3

Inventory turnover is 5.82 times in 2019, 3.56 times in 2018, and 2.05 in 2017. Days' sales in inventory is 62.71 days in 2019, 102.53 days in 2018, and 178.05 days in 2017.

Calculations:

Average merchandise inventory	=	(Beginning merchandise inventory + Ending merchandise inventory) / 2
Year Ended Dec. 31, 2019:		
	=	($22,000 + $23,000) / 2
	=	$22,500
Year Ended Dec. 31, 2018:		
	=	($37,000 + $22,000) / 2
	=	$29,500
Year Ended Dec. 31, 2017:		
	=	($46,000 + $37,000) / 2
	=	$41,500

P6-31A, cont.
Requirement 3, cont.

Inventory turnover	=	Cost of goods sold / Average merchandise inventory
Year Ended Dec. 31, 2019:		
	=	\$131,000 / \$22,500
	=	5.82 times for the year
Year Ended Dec. 31, 2018:		
	=	\$105,000 / \$29,500
	=	3.56 times for the year
Year Ended Dec. 31, 2017:		
	=	\$85,000 / \$41,500
	=	2.05 times for the year

Days' sales in inventory	=	365 days / Inventory turnover
Year Ended Dec. 31, 2019:		
	=	365 days / 5.82 times
	=	62.71 days
Year Ended Dec. 31, 2018:		
	=	365 days / 3.56 times
	=	102.53 days
Year Ended Dec. 31, 2017:		
	=	365 days / 2.05 times
	=	178.05 days

P6A-32A
Requirement 1

Using FIFO, ending merchandise inventory is $7,410 and cost of goods sold is $6,230.

Using LIFO, ending merchandise inventory is $6,680 and cost of goods sold is $6,960.

Using weighted-average, ending merchandise inventory is $7,040 and cost of goods sold is $6,600.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
Oct. 1	65 units	× $ 82	= $ 5,330
3	25 units	× $ 90	= $ 2,250
12	30 units	× $ 90	= $ 2,700
18	35 units	× $ 96	= $ 3,360
Totals	155 units		$ 13,640

FIFO Ending Merchandise Inventory:

	Quantity	Unit Cost	Total Cost
	35 units	× $ 96	= $ 3,360
	30 units	× $ 90	= $ 2,700
	15 units	× $ 90	= $ 1,350
Totals	80 units		$ 7,410

P6A-32A, cont.
Requirement 1, cont.

FIFO Cost of Goods Sold:

Cost of Goods Available for Sale	$ 13,640
Ending Merchandise Inventory	(7,410)
Cost of Goods Sold	$ 6,230

Alternatively, FIFO Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	65 units	× $ 82	= $ 5,330
	10 units	× $ 90	= $ 900
Totals	75 units		$ 6,230

LIFO Ending Merchandise Inventory:

	Quantity	Unit Cost	Total Cost
	65 units	× $ 82	= $ 5,330
	15 units	× $ 90	= $ 1,350
Totals	80 units		$ 6,680

LIFO Cost of Goods Sold:

Cost of Goods Available for Sale	$ 13,640
Ending Merchandise Inventory	(6,680)
Cost of Goods Sold	$ 6,960

Alternatively, LIFO Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	35 units	× $ 96	= $ 3,360
	30 units	× $ 90	= $ 2,700
	10 units	× $ 90	= $ 900
Totals	75 units		$ 6,960

P6A-32A, cont.
Requirement 1, cont.

Weighted-average cost per unit = 13,640 cost of goods available for sale / 155 units available for sale

= \$88 per unit

Weighted-Average Ending Merchandise Inventory = 80 units × \$88 per unit

= \$7,040

Weighted-Average Cost of Goods Sold:

Cost of Goods Available for Sale	\$ 13,640
Ending Merchandise Inventory	(7,040)
Cost of Goods Sold	\$ 6,600

Alternatively, Weighted-Average Cost of Goods Sold:

= 75 units sold × \$88 per unit

= \$6,600

Requirement 2
Gross profit is \$21,770 using FIFO, \$21,040 using LIFO, and \$21,400 using weighted-average.

Calculations:

	FIFO	LIFO	Weighted-Average
Sales Revenue	\$ 28,000	\$ 28,000	\$ 28,000
Cost of Goods Sold *	(6,230)	(6,960)	(6,600)
Gross Profit	\$ 21,770	\$ 21,040	\$ 21,400

* Calculated in Requirement 1.

Requirement 3
LIFO results in the lowest income taxes and FIFO results in the highest net income. Under LIFO, the last costs into inventory are the first costs out to cost of goods sold. When inventory costs are rising, LIFO results in the highest cost of goods sold; thus, the lowest gross profit, net income, and taxable income. Under FIFO, the first costs into inventory are the first costs out to cost of goods sold. When inventory costs are rising, FIFO results in the lowest cost of goods sold; thus, the highest gross profit, net income, and taxable income.

Weighted-average method amounts fall somewhere in between FIFO and LIFO since this method is based on the weighted average cost of inventory during the period.

Problems (Group B)

P6-33B
Requirement 1

Using FIFO, cost of goods sold is $24,330, ending merchandise inventory is $6,020, and gross profit is $8,390.

Perpetual Inventory Record: FIFO

Date	Purchases Quantity	Purchases Unit Cost	Purchases Total Cost	Cost of Goods Sold Quantity	Cost of Goods Sold Unit Cost	Cost of Goods Sold Total Cost		Inventory on Hand Quantity	Inventory on Hand Unit Cost	Inventory on Hand Total Cost	
Jan. 1								90 units	× $ 65 [a]	= $ 5,850	$ 5,850
2	130 units	× $ 76	= $ 9,880					90 units 130 units	× $ 65 × $ 76	= $ 5,850 = $ 9,880	$ 15,730
5				90 units 50 units	× $ 65 × $ 76	= $ 5,850 = $ 3,800	$ 9,650	80 units	× $ 76	= $ 6,080	$ 6,080
16	170 units	× $ 86	= $14,620					80 units 170 units	× $ 76 × $ 86	= $ 6,080 = $14,620	$ 20,700
27				80 units 100 units	× $ 76 × $ 86	= $ 6,080 = $ 8,600	$ 14,680	70 units	× $ 86	= $ 6,020	$ 6,020
Totals	300 units		$24,500	320 units			$ 24,330	70 units			$ 6,020

P6-33B, cont.
Requirement 1, cont.

Calculations:

[a] Jan. 1 inventory unit cost	=	Total cost / Total number of units
	=	$5,850 / 90 units
	=	$65 per unit

Sales revenue	=	Number of crates sold × Sales price per crate
Sale 1:		
	=	140 crates × $100 per crate
	=	$14,000
Sale 2:		
	=	180 crates × $104 per crate
	=	$18,720

Total sales revenue	=	Sales revenue from Sale 1 + Sales revenue from Sale 2
	=	$14,000 + $18,720
	=	$32,720

Total Sales Revenue	$ 32,720
Cost of Goods Sold	(24,330)
Gross Profit	$ 8,390

P6-33B, cont.
Requirement 2

Using LIFO, cost of goods sold is $25,800, ending merchandise inventory is $4,550, and gross profit is $6,920.

Perpetual Inventory Record: LIFO

Date	Purchases			Cost of Goods Sold				Inventory on Hand			
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Jan. 1								90 units	× $ 65 [b]	= $ 5,850	$ 5,850
2	130 units	× $ 76	= $ 9,880					90 units 130 units	× $ 65 × $ 76	= $ 5,850 = $ 9,880	$15,730
5				130 units 10 units	× $ 76 × $ 65	= $ 9,880 = $ 650	$10,530	80 units	× $ 65	= $ 5,200	$ 5,200
16	170 units	× $ 86	= $14,620					80 units 170 units	× $ 65 × $ 86	= $ 5,200 = $14,620	$19,820
27				170 units 10 units	× $ 86 × $ 65	=$14,620 =$ 650	$15,270	70 units	× $ 65	= $ 4,550	$ 4,550
Totals	300 units		$ 24,500	320 units			$ 25,800	70 units			$ 4,550

[b] Calculated in Requirement 1.

Total Sales Revenue[c]	$ 32,720
Cost of Goods Sold	(25,800)
Gross Profit	$ 6,920

[c] Calculated in Requirement 1.

P6-33B, cont.
Requirement 3

Using weighted-average, cost of goods sold is $24,655, ending merchandise inventory is $5,695, and gross profit is $8,065.

Perpetual Inventory Record: Weighted-Average

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jan. 1							90 units	× $ 65.00 [d]	= $ 5,850
2	130 units	× $ 76	= $ 9,880				220 units	× $ 71.50 [e]	= $15,730
5				140 units	× $71.50	= $10,010	80 units	× $ 71.50	= $ 5,720
16	170 units	× $ 86	= $ 14,620				250 units	× $ 81.36 [f]	= $20,340
27				180 units	× $81.36	= $14,645	70 units	× $ 81.36	= $ 5,695
Totals	300 units		$24,500	320 units		$24,655	70 units		$ 5,695

[d] Calculated in Requirement 1.

Weighted average cost per unit = Cost of goods available for sale / Number of units available

[e] After Purchase 1:
= ($5,850 + $9,880) / (90 units + 130 units)
= $15,730 / 220 units
= $71.50 per unit

[f] After Purchase 2:
= ($5,720 + $14,620) / (80 units + 170 units)
= $20,340 / 250 units
= $81.36 per unit

P6-33B, cont.
Requirement 3, cont.

Total Sales Revenue[g]	$ 32,720
Cost of Goods Sold	(24,655)
Gross Profit	$ 8,065

[g] Calculated in Requirement 1.

Requirement 4

If the business wanted to pay the least amount of income taxes possible, they would choose LIFO.

P6-34B
Requirement 1

Perpetual Inventory Record: FIFO

Date	Purchases Quantity	Purchases Unit Cost	Purchases Total Cost	Cost of Goods Sold Quantity	Cost of Goods Sold Unit Cost	Cost of Goods Sold Total Cost		Inventory on Hand Quantity	Inventory on Hand Unit Cost	Inventory on Hand Total Cost	
Jan. 1								55 units	× $ 35	= $ 1,925	$ 1,925
3				45 units	× $ 35	= $ 1,575	$ 1,575	10 units	× $ 35	= $ 350	$ 350
8	75 units	× $ 52	= $ 3,900					10 units 75 units	× $ 35 × $ 52	= $ 350 = $ 3,900	$ 4,250
21				10 units 60 units	× $ 35 × $ 52	= $ 350 = $ 3,120	$ 3,470	15 units	× $ 52	= $ 780	$ 780
30	10 units	× $ 55	= $ 550					15 units 10 units	× $ 52 × $ 55	= $ 780 = $ 550	$ 1,330
Totals	85 units		$ 4,450	115 units			$ 5,045	25 units			$ 1,330

P6-34B, cont.
Requirement 2

Perpetual Inventory Record: LIFO

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jan. 1							55 units	× $ 35	= $ 1,925 → $ 1,925
3				45 units	× $ 35	= $ 1,575 → $ 1,575	10 units	× $ 35	= $ 350 → $ 350
8	75 units	× $ 52	= $ 3,900				10 units 75 units	× $ 35 × $ 52	= $ 350 = $ 3,900 → $ 4,250
21				70 units	× $ 52	= $ 3,640 → $ 3,640	10 units 5 units	× $ 35 × $ 52	= $ 350 = $ 260 → $ 610
30	10 units	× $ 55	= $ 550				10 units 5 units 10 units	× $ 35 × $ 52 × $ 55	= $ 350 = $ 260 = $ 550 → $ 1,160
Totals	85 units		$ 4,450	115 units		$ 5,215	25 units		$ 1,160

P6-34B, cont.
Requirement 3

Perpetual Inventory Record: Weighted-Average

	Purchases			Cost of Goods Sold			Inventory on Hand		
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jan. 1							55 units	× $ 35	= $ 1,925
3				45 units	× $ 35	= $ 1,575	10 units	× $ 35	= $ 350
8	75 units	× $ 52	= $ 3,900				85 units	× $ 50 (a)	= $ 4,250
21				70 units	× $ 50	= $ 3,500	15 units	× $ 50	= $ 750
30	10 units	× $ 55	= $ 550				25 units	× $ 52 (b)	= $ 1,300
Totals	85 units		$ 4,450	115 units		$ 5,075	25 units		$ 1,300

Calculations:

Weighted average cost per unit = Cost of goods available for sale / Number of units available

(a) After the Jan. 8 purchase:
= ($350 + $3,900) / (10 units + 75 units)
= $4,250 / 85 units
= $50 per unit

(b) After the Jan. 30 purchase:
= ($750 + $550) / (15 units + 10 units)
= $1,300 / 25 units
= $52 per unit

P6-34B, cont.
Requirement 4

Cost of goods sold is $5,045 using FIFO, $5,215 using LIFO, and $5,075 using weighted-average. (Amounts calculated in Requirements 1, 2, and 3, respectively.)

Requirement 5

Gross profit is $4,640 using FIFO, $4,470 using LIFO, and $4,610 using weighted-average.

Calculations:

Sales revenue = Number of units sold × Sales price per unit

Jan. 3 sale:
= 45 units × $83 per unit
= $3,735

Jan. 21 sale:
= 70 units × $85 per unit
= $5,950

Total sales revenue = Sales revenue from Jan. 3 sale + Sales revenue from Jan. 21 sale
= $3,735 + $5,950
= $9,685

	FIFO	LIFO	Weighted-Average
Total Sales Revenue	$ 9,685	$ 9,685	$ 9,685
Cost of Goods Sold	(5,045)	(5,215)	(5,075)
Gross Profit	$ 4,640	$ 4,470	$ 4,610

Requirement 6

If the business wanted to maximize gross profit they would select FIFO.

P6-35B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold	32,000	
	Merchandise Inventory		32,000
	To write merchandise inventory down to market value.		

Requirement 2

Merchandise inventory should be reported at $66,000 on the balance sheet.

Calculations:

$98,000	Merchandise inventory prior to adjustment
(32,000)	Adjustment
$66,000	Merchandise inventory, adjusted

Requirement 3

Cost of goods sold should be reported at $442,000 on the income statement.

Calculations:

$ 410,000	Cost of goods sold prior to adjustment
32,000	Adjustment
$ 442,000	Cost of goods sold, adjusted

Requirement 4

The conservatism principle is most relevant to this situation.

P6-36B
Requirement 1
Corrected income statements:

ANTIQUE CARPETS Income Statements Years Ended December 31, 2019, 2018, and 2017	2019		2018		2017	
Net Sales Revenue		$ 212,000		$ 161,000		$ 170,000
Cost of Goods Sold:						
Beginning Merchandise Inventory	$ 22,000		$ 36,000[b]		$ 41,000	
Net Cost of Purchases	131,000		100,000		86,000	
Cost of Goods Available for Sale	153,000		136,000		127,000	
Less: Ending Merchandise Inventory	25,000[a]		22,000		36,000[b]	
Cost of Goods Sold		128,000		114,000		91,000
Gross Profit		84,000		47,000		79,000
Operating Expenses		63,000		28,000		39,000
Net Income		$ 21,000		$ 19,000		$ 40,000

Calculations:

	December 31 2019	 2017
Incorrect Merchandise Inventory	$ 34,000	$ 28,000
Understatement (Overstatement)	(9,000)	8,000
Correct Merchandise Inventory	$ 25,000[a]	$ 36,000[b]

P6-36B, cont.
Requirement 2

Before correction, net income is overstated by $9,000 in 2019, overstated by $8,000 in 2018, and understated by $8,000 in 2017.

Calculations:

	2019	2018	2017
Correct Net Income[c]	$ 21,000	$ 19,000	$ 40,000
Incorrect Net Income	(30,000)	(27,000)	(32,000)
Understatement (Overstatement)	$ (9,000)	$ (8,000)	$ 8,000

[c] Calculated in Requirement 1.

Requirement 3

Inventory turnover is 5.45 times in 2019, 3.93 times in 2018, and 2.36 in 2017. Days' sales in inventory is 66.97 days in 2019, 92.88 days in 2018, and 154.66 days in 2017.

Calculations:

Average merchandise inventory	=	(Beginning merchandise inventory + Ending merchandise inventory) / 2
Year Ended Dec. 31, 2019:		
	=	($22,000 + $25,000) / 2
	=	$23,500
Year Ended Dec. 31, 2018:		
	=	($36,000 + $22,000) / 2
	=	$29,000
Year Ended Dec. 31, 2017:		
	=	($41,000 + $36,000) / 2
	=	$38,500

P6-36B, cont.
Requirement 3, cont.

Inventory turnover	=	Cost of goods sold / Average merchandise inventory
Year Ended Dec. 31, 2019:		
	=	\$128,000 / \$23,500
	=	5.45 times for the year
Year Ended Dec. 31, 2018:		
	=	\$114,000 / \$29,000
	=	3.93 times for the year
Year Ended Dec. 31, 2017:		
	=	\$91,000 / \$38,500
	=	2.36 times for the year

Days' sales in inventory	=	365 days / Inventory turnover
Year Ended Dec. 31, 2019:		
	=	365 days / 5.45 times
	=	66.97 days
Year Ended Dec. 31, 2018:		
	=	365 days / 3.93 times
	=	92.88 days
Year Ended Dec. 31, 2017:		
	=	365 days / 2.36 times
	=	154.66 days

P6A-37B
Requirement 1

Using FIFO, ending merchandise inventory is $11,350 and cost of goods sold is $9,050.

Using LIFO, ending merchandise inventory is $9,460 and cost of goods sold is $10,940.

Using weighted-average, ending merchandise inventory is $10,400 and cost of goods sold is $10,000.

Calculations:

Goods Available for Sale:

Date	Quantity	Unit Cost	Total Cost
Oct. 1	100 units	× $ 70	= $ 7,000
3	35 units	× $ 82	= $ 2,870
12	45 units	× $ 84	= $ 3,780
18	75 units	× $ 90	= $ 6,750
Totals	255 units		$ 20,400

FIFO Ending Merchandise Inventory:

	Quantity	Unit Cost	Total Cost
	75 units	× $ 90	= $ 6,750
	45 units	× $ 84	= $ 3,780
	10 units	× $ 82	= $ 820
Totals	130 units		$11,350

P6A-37B, cont.
Requirement 1, cont.

FIFO Cost of Goods Sold:

Cost of Goods Available for Sale	$ 20,400
Ending Merchandise Inventory	(11,350)
Cost of Goods Sold	$ 9,050

Alternatively, FIFO Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	100 units	× $ 70	= $ 7,000
	25 units	× $ 82	= $ 2,050
Totals	125 units		$ 9,050

LIFO Ending Merchandise Inventory:

	Quantity	Unit Cost	Total Cost
	100 units	× $ 70	= $ 7,000
	30 units	× $ 82	= $ 2,460
Totals	130 units		$ 9,460

LIFO Cost of Goods Sold:

Cost of Goods Available for Sale	$ 20,400
Ending Merchandise Inventory	(9,460)
Cost of Goods Sold	$ 10,940

Alternatively, LIFO Cost of Goods Sold:

	Quantity	Unit Cost	Total Cost
	75 units	× $ 90	= $ 6,750
	45 units	× $ 84	= $ 3,780
	5 units	× $ 82	= $ 410
Totals	125 units		$ 10,940

P6A-37B, cont.
Requirement 1, cont.

$$\text{Weighted-average cost per unit} = \$20{,}400 \text{ cost of goods available for sale} / 255 \text{ units available for sale}$$
$$= \$80 \text{ per unit}$$

$$\text{Weighted-Average Ending Merchandise Inventory} = 130 \text{ units} \times \$80 \text{ per unit}$$
$$= \$10{,}400$$

Weighted-Average Cost of Goods Sold:

Cost of Goods Available for Sale	$ 20,400
Ending Merchandise Inventory	(10,400)
Cost of Goods Sold	$ 10,000

Alternatively, Weighted-Average Cost of Goods Sold:

$$= 125 \text{ units sold} \times \$80 \text{ per unit}$$
$$= \$10{,}000$$

Requirement 2
Gross profit is $16,950 using FIFO, $15,060 using LIFO, and $16,000 using weighted-average.

Calculations:

	FIFO	LIFO	Weighted-Average
Sales Revenue	$ 26,000	$ 26,000	$ 26,000
Cost of Goods Sold *	(9,050)	(10,940)	(10,000)
Gross Profit	$ 16,950	$ 15,060	$ 16,000

*Calculated in Requirement 1.

Requirement 3
LIFO results in the lowest income taxes and FIFO results in the highest net income. Under LIFO, the last costs into inventory are the first costs out to cost of goods sold. When inventory costs are rising, LIFO results in the highest cost of goods sold; thus, the lowest gross profit, net income, and taxable income.Under FIFO, the first costs into inventory are the first costs out to cost of goods sold. When inventory costs are rising, FIFO results in the lowest cost of goods sold; thus, the highest gross profit, net income, and taxable income.

Weighted-average method amounts fall somewhere in between FIFO and LIFO since this method is based on the weighted average cost of inventory during the period.

Using Excel

P6-38

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P6-39, Requirement 1

	Purchases			**Cost of Goods Sold**				**Inventory on Hand**			
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**		**Quantity**	**Unit Cost**	**Total Cost**	
Feb. 1								94 units	× $5	= $470	$470
2				60 units	× $5	= $300	$300	34 units	× $5	= $170	$170
5	50 units	× $6	= $300					34 units	× $5	= $170	$470
								50 units	× $6	= $300	
7				34 units	× $5	= $170	$236	39 units	× $6	= $234	$234
				11 units	× $6	= $66					
8				20 units	× $6	= $120	$120	19 units	× $6	= $114	$114
10	20 units	× $7	= $140					19 units	× $6	= $114	$254
								20 units	× $7	= $140	
12	40 units	× $7	= $280					19 units	× $6	= $114	$534
								60 units	× $7	= $420	
13				19 units	× $6	= $114	$121	59 units	× $7	= $413	$413
				1 units	× $7	= $7					
15	50 units	× $6	= $300					59 units	× $7	= $413	$713
								50 units	× $6	= $300	
20	150 units	× $5	= $750					59 units	× $7	= $413	$1,463
								50 units	× $6	= $300	
								150 units	× $5	= $750	
21				40 units	× $7	= $280	$280	19 units	× $7	= $133	$1,183
								50 units	× $6	= $300	
								150 units	× $5	= $750	
22				19 units	× $7	= $133	$229	34 units	× $6	= $204	$954
				16 units	× $6	= $96		150 units	× $5	= $750	
24				20 units	$6	= $120	$120	14 units	× $6	= $84	$834
								150 units	× $5	= $750	
25				14 units	× $6	= $84	$239	119 units	× $5	= $595	$595
				31 units	× $5	= $155					
27				40 units	× $5	= $200	$200	79 units	× $5	= $395	$395
Totals	310 units		$1,770	325 units			$1,845	79 units			$395

P6-39
Requirement 2

	Number of T-shirts	Dollar Amount
Beginning Balance	94 T-shirts	$ 470
Add: Purchases	310 T-shirts	1,770
Less: Cost of Goods Sold	(325) T-shirts	(1,845)
Ending Balance	79 T-shirts	$ 395

Practice Set

P6-40
Requirement 1
Perpetual Inventory Record: FIFO

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost		Quantity	Unit Cost	Total Cost	
Dec. 2	1,000 units	× $ 4.00[a]	= $ 4,000					1,000 units	× $ 4.00	= $ 4,000	$ 4,000
5	1,200 units	× $ 5.00[b]	= $ 6,000					1,000 units 1,200 units	× $ 4.00 × $ 5.00	= $ 4,000 = $ 6,000	$ 10,000
7	(300 units)	× $ 4.00	= ($1,200)					700 units 1,200 units	× $ 4.00 × $ 5.00	= $ 2,800 = $ 6,000	$ 8,800
9			($228) [c]					700 units 1,200 units	× $ 4.00 × $ 4.81[e]	= $ 2,800 = $ 5,772[d]	$ 8,572
11				500 units	× $ 4.00	= $ 2,000	$ 2,000	200 units 1,200 units	× $ 4.00 × $ 4.81	= $ 800 = $ 5,772	$ 6,572
12			($140) [f]					200 units 1,200 units	× $ 3.30[h] × $ 4.81	= $ 660[g] = $ 5,772	$ 6,432
15				(100 units)	× $ 4.00	= ($ 400)	($ 400)	100 units 200 units 1,200 units	× $ 4.00 × $ 3.30 × $ 4.81	= $ 400 = $ 660 = $ 5,772	$ 6,832
28				100 units 200 units 200 units	× $ 4.00 × $ 3.30 × $ 4.81	= $ 400 = $ 660 = $ 962	$ 2,022	1,000 units	× $ 4.81	= $ 4,810	$ 4,810
31				200 units[i]	× $ 4.81	= $ 962	$ 962	800 units	× $ 4.81	= $ 3,848	$ 3,848
Totals	1,900 units		$ 8,432	1,100 units			$ 4,584	800 units			$ 3,848

P6-40, cont.
Requirement 1, cont.

Calculations:

Unit cost of inventory purchased	=	Total cost / Total number of units
[a] Dec. 2 purchase:		
	=	$4,000 / 1,000 units
	=	$4.00 per unit
[b] Dec. 5 purchase:		
	=	$6,000 / 1,200 units
	=	$5.00 per unit

December 9:

Amount due, net of freight-in	=	$6,000 total invoice – $300 freight-in included
	=	$5,700
[c] Purchase discount	=	$5,700 amount due net of freight-in × 0.04 percentage purchase discount
	=	$228
[d] Total cost of the 1,200-units-layer of inventory, net of purchase discount	=	$6,000 total cost before discount – $228 discount
	=	$5,772
[e] Unit cost of the 1,200-units-layer of inventory, net of purchase discount	=	$5,772 total cost net of discount / 1,200 units
	=	$4.81 per unit

P6-40, cont.
Requirement 1, cont.

December 12:

Amount due, net of purchase return	=	$4,000 cost of 1,000 units – $1,200 cost of 300 units returned
	=	$2,800
[f] Purchase discount	=	$2,800 amount due net of purchase return × 0.05 percentage purchase discount
	=	$140
[g] Total cost of the 200-units-layer of inventory, net of purchase discount	=	$800 total cost before discount – $140 discount
	=	$660
[h] Unit cost of the 200-units-layer of inventory, net of purchase discount	=	$660 total cost net of discount / 200 units
	=	$3.30 per unit

---

[i] Adjustment for inventory shrinkage:

800 units	per physical count
(1,000 units)	per inventory records
(200 units)	Adjustment needed
× $4.81 per unit	
$962	

P6-40, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 11	Accounts Receivable—Happy Maids	5,500	
	Sales Revenue		5,500
	Sale on account.		
	Cost of Goods Sold	2,000	
	Merchandise Inventory		2,000
	Recorded the cost of goods sold.		
28	Accounts Receivable—Bridget, Inc.	6,435	
	Sales Revenue ($6,500 - ($6,500 × 0.01))		6,435
	Sale on account.		
	Cost of Goods Sold	2,022	
	Merchandise Inventory		2,022
	Recorded the cost of goods sold.		
31	Cost of Goods Sold	962	
	Merchandise Inventory		962
	Adjustment for inventory shrinkage.		

Comprehensive Problem for Chapters 5 and 6

Requirements 1, 4, 5, 10

Cash

Bal.	457,000		
Oct. 20	176,400	250,000	Oct. 30
Oct. 23	19,600	40,000	Oct. 31
Nov. 5	249,900	2,500	Oct. 31
Nov. 8	58,800	1,000	Nov. 10
Nov. 28	217,800	40,000	Nov. 30
Dec. 15	40,000	2,670	Nov. 30
		395,000	Dec. 5
		50,000	Dec. 15
		40,000	Dec. 31
		3,200	Dec. 31
Bal.	395,130		

Accounts Receivable

Bal.	0		
Oct. 12	176,400	176,400	Oct. 20
Oct. 15	19,600	19,600	Oct. 23
Oct. 28	249,900	249,900	Nov. 5
Nov. 1	58,800	58,800	Nov. 8
Nov. 15	40,000	217,800	Nov. 28
Nov. 18	217,800	40,000	Dec. 15
Dec. 27	308,700		
Bal.	308,700		

Merchandise Inventory

Bal.	126,000		
Oct. 1	250,000	73,000	Oct. 12
Nov. 5	395,000	8,000	Oct. 15
		105,500	Oct. 28
		25,500	Nov. 1
		18,000	Nov. 15
		88,500	Nov. 18
		146,500	Dec. 27
Unadj. Bal.	306,000		
		205	Adj.
Bal.	305,795		

Comprehensive Problem, cont.
Requirements 1, 4, 5, 10, cont.

Office Supplies

Bal.	275		
Nov. 10	325		
Unadj. Bal.	600		
		400	Adj.
Bal.	200		

Warehouse Supplies

Bal.	350		
Nov. 10	675		
Unadj. Bal.	1,025		
		375	Adj.
Bal.	650		

Land

Bal.	20,000		

Building

Bal.	780,000		

Office Furniture and Equipment

Bal.	125,000		

Warehouse Fixtures

Bal.	260,000		

Accumulated Depreciation

		194,000	Bal.
		48,500	Adj.
		242,500	Bal.

Accounts Payable

		0	Bal.
Oct. 30	250,000	250,000	Oct. 1
Dec. 5	395,000	395,000	Nov. 5
		0	Bal.

Common Stock

		100,000	Bal.

Comprehensive Problem, cont.
Requirements 1, 4, 5, 10, cont.

Retained Earnings

		298,925	Bal.
Clos.	50,000	1,604,050	Clos.
		1,852,975	Bal.

Dividends

Bal.	0		
Dec. 15	50,000		
Bal.	50,000		
		50,000	Clos.
Bal.	0		

Sales Revenue

		2,654,150	Bal.
		176,400	Oct. 12
		19,600	Oct. 15
		249,900	Oct. 28
		58,800	Nov. 1
		40,000	Nov. 15
		217,800	Nov. 18
		308,700	Dec. 27
		3,725,350	Bal.
Clos.	3,725,350		
		0	Bal,

Cost of Goods Sold

Bal.	1,061,450		
Oct. 12	73,000		
Oct. 15	8,000		
Oct. 28	105,500		
Nov. 1	25,500		
Nov. 15	18,000		
Nov. 18	88,500		
Dec. 27	146,500		
Unadj. Bal.	1,526,450		
Adj.	205		
Adj. Bal.	1,526,655		
		1,526,655	Clos.
Bal.	0		

Comprehensive Problem, cont.
Requirements 1, 4, 5, 10, cont.

Salaries Expense—Selling

Bal.	270,000		
Oct. 31	30,000		
Nov. 30	30,000		
Dec. 31	30,000		
Unadj. Bal.	360,000		
		360,000	Clos.
Bal.	0		

Utilities Expense—Selling

Bal.	32,000		
Oct. 31	1,500		
Nov. 30	1,602		
Dec. 31	1,920		
Bal.	37,022		
		37,022	Clos.
Bal.	0		

Supplies Expense—Selling

Bal.	0		
Adj.	375		
Adj. Bal.	375		
		375	Clos.
Bal.	0		

Depreciation Expense—Selling

Bal.	0		
Adj.	36,375		
Adj. Bal.	36,375		
		36,375	Clos.
Bal.	0		

Salaries Expense—Administrative

Bal.	90,000		
Oct. 31	10,000		
Nov. 30	10,000		
Dec. 31	10,000		
Unadj. Bal.	120,000		
		120,000	Clos.
Bal.	0		

Comprehensive Problem, cont.
Requirements 1, 4, 5, 10, cont.

Utilities Expense—Administrative

Bal.	25,000		
Oct. 31	1,000		
Nov. 30	1,068		
Dec. 31	1,280		
Unadj. Bal.	28,348		
		28,348	Clos.
Bal.	0		

Supplies Expense—Administrative

Bal.	0		
Adj.	400		
Adj. Bal.	400		
		400	Clos.
Bal.	0		

Depreciation Expense—Administrative

Bal.	0		
Adj.	12,125		
Adj. Bal.	12,125		
		12,125	Clos.
Bal.	0		

Income Summary

Clos.	2,121,300	3,725,350	Clos.
		1,604,050	Bal.
Clos.	1,604,050		
Bal.	0		

Comprehensive Problem, cont.
Requirements 2 and 5

DESK LAMPS

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**		**Quantity**	**Unit Cost**	**Total Cost**	
Sep. 30								2,500 units	× $8	= $20,000	$20,000
Oct. 1	5,000 units	× $9	= $45,000					2,500 units 5,000 units	× $8 × $9	= $20,000 = $45,000	$65,000
15				1,000 units	× $8	= $8,000	$8,000	1,500 units 5,000 units	× $8 × $9	= $12,000 = $45,000	$ 57,000
Nov. 1				1,500 units 1,500 units	× $8 × $9	= $12,000 = $13,500	$25,500	3,500 units	× $9	= $31,500	$31,500
5	5,000 units	× $10	= $50,000					3,500 units 5,000 units	× $9 × $10	= $31,500 = $50,000	$ 81,500
15				2,000 units	× $9	= $18,000	$18,000	1,500 units 5,000 units	× $9 × $10	= $13,500 = $50,000	$63,500
Dec. 27				1,500 units 3,000 units	× $9 × $10	= $13,500 = $30,000	$43,500	2,000 units	× $10	= $20,000	$ 20,000
31				10 units	× $10	= $100	$100	1,990 units	× $10	= $19,900	$19,900
Totals	10,000 units		$ 95,000	10,510 units			$95,100	1,990 units		$19,900	$ 19,900

Comprehensive Problem, cont.
Requirements 2 and 5, cont.

TABLE LAMPS

	Purchases			**Cost of Goods Sold**				**Inventory on Hand**			
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**		**Quantity**	**Unit Cost**	**Total Cost**	
Sep. 30								3,000 units	× $18	= $54,000	$54,000
Oct. 1	7,500 units	× $19	= $142,500					3,000 units 7,500 units	× $18 × $19	= $54,000 = $142,500	$196,500
12				3,000 units 1,000 units	× $18 × $19	= $54,000 = $19,000	$73,000	6,500 units	× $19	= $123,500	$123,500
28				3,500 units	× $19	= $66,500	$66,500	3,000 units	× $19	= $57,000	$57,000
Nov. 5	10,000 units	× $21	= $210,000					3,000 units 10,000 units	× $19 × $21	= $57,000 = $210,000	$267,000
18				2,000 units	× $19	= $38,000	$ 38,000	1,000 units 10,000 units	× $19 × $21	= $19,000 = $210,000	$229,000
Dec. 27				1,000 units 4,000 units	× $19 × $21	= $19,000 = $84,000	$ 103,000	6,000 units	× $21	= $126,000	$ 126,000
31				5 units	× $21	= $105	$105	5,995 units	× $21	= $125,895	$ 125,895
Totals	17,500 units		$ 352,500	14,505 units			$ 280,605	5,995 units		$ 125,595	$ 125,895

Comprehensive Problem, cont.
Requirements 2 and 5, cont.

FLOOR LAMPS

	Purchases			Cost of Goods Sold				Inventory on Hand			
Date	**Quantity**	**Unit Cost**	**Total Cost**	**Quantity**	**Unit Cost**	**Total Cost**		**Quantity**	**Unit Cost**	**Total Cost**	
Sep. 30								2,000 units	× $26	= $52,000	$52,000
Oct. 1	2,500 units	× $25	= $62,500					2,000 units 2,500 units	× $26 × $25	= $52,000 = $62,500	$114,500
28				1,500 units	× $26	= $39,000	$39,000	500 units 2,500 units	× $26 × $25	= $13,000 = $62,500	$75,500
Nov. 5	5,000 units	× $27	= $135,000					500 units 2,500 units 5,000 units	× $26 × $25 × $27	= $13,000 = $62,500 = $135,000	$210,500
18				500 units 1,500 units	× $26 × $25	= $13,000 = $37,500	$ 50,500	1,000 units 5,000 units	× $25 × $27	= $25,000 = $135,000	$160,000
Totals	7,500 units		$197,500	3,500 units			$89,500	6,000 units		$160,000	$160,000

Comprehensive Problem, cont.
Requirement 3

Date	Accounts	Debit	Credit
Oct. 1	Merchandise Inventory	250,000	
	Accounts Payable		250,000
	(5,000 × \$9) + (7,500 × \$19) + (2,500 × \$25)		
12	Accounts Receivable—Atlas	176,400	
	Sales Revenue		176,400
	4,000 × \$45 = \$180,000; \$180,000 − (\$180,000 × 0.02)		
	Cost of Goods Sold*	73,000	
	Merchandise Inventory		73,000
15	Accounts Receivable—Hiawassee	19,600	
	Sales Revenue		19,600
	1,000 × \$20 = \$20,000; \$20,000 − (\$20,000 × 0.02)		
	Cost of Goods Sold*	8,000	
	Merchandise Inventory		8,000
20	Cash	176,400	
	Accounts Receivable—Atlas		176,400
23	Cash	19,600	
	Accounts Receivable—Hiawassee		19,600
28	Accounts Receivable—Parkway	249,900	
	Sales Revenue		249,900
	(3,500 × \$45) + (1,500 × \$65) = \$255,000; \$255,000 − (\$255,000 × 0.02)		
	Cost of Goods Sold*	105,500	
	Merchandise Inventory		105,500
30	Accounts Payable	250,000	
	Cash		250,000
31	Salaries Expense—Selling	30,000	
	Salaries Expense—Administrative	10,000	
	Cash		40,000

* See Inventory Records

Comprehensive Problem, cont.
Requirement 3, cont.

Date	Accounts	Debit	Credit
Oct. 31	Utilities Expense—Selling	1,500	
	Utilities Expense—Administrative	1,000	
	Cash		2,500
Nov. 1	Accounts Receivable—Hiawassee	58,800	
	Sales Revenue		58,800
	3,000 × $20 = $60,000; $60,000 − ($60,000 × 0.02)		
	Cost of Goods Sold*	25,500	
	Merchandise Inventory		25,500
5	Merchandise Inventory	395,000	
	Accounts Payable		395,000
	(5,000 × $10) + (10,000 × $21) + (5,000 × $27)		
5	Cash	249,900	
	Accounts Receivable—Parkway		249,900
8	Cash	58,800	
	Accounts Receivable—Hiawassee		58,800
10	Office Supplies	325	
	Warehouse Supplies	675	
	Cash		1,000
15	Accounts Receivable—Anderson	40,000	
	Sales Revenue		40,000
	2,000 × $20 = $40,000		
	Cost of Goods Sold*	18,000	
	Merchandise Inventory		18,000

* See Inventory Records

Comprehensive Problem, cont.
Requirement 3, cont.

Date	Accounts	Debit	Credit
Nov. 18	Accounts Receivable—Go-Mart	217,800	
	Sales Revenue		217,800
	(2,000 × $45) + (2,000 × $65) = $220,000;		
	$220,000 − ($220,000 × 0.01)		
	Cost of Goods Sold*	88,500	
	Merchandise Inventory		88,500
28	Cash	217,800	
	Accounts Receivable—Go-Mart		217,800
30	Salaries Expense—Selling	30,000	
	Salaries Expense—Administrative	10,000	
	Cash		40,000
30	Utilities Expense—Selling	1,602	
	Utilities Expense—Administrative	1,068	
	Cash		2,670
Dec. 5	Accounts Payable	395,000	
	Cash		395,000
15	Cash	40,000	
	Accounts Receivable—Anderson		40,000
15	Dividends	50,000	
	Cash		50,000
27	Accounts Receivable—Atlas	308,700	
	Sales Revenue		308,700
	(4,500 × $20) + (5,000 × $45) = $315,000;		
	$315,000 − ($315,000 × 0.02)		
	Cost of Goods Sold*	146,500	
	Merchandise Inventory		146,500

* See Inventory Records

Comprehensive Problem, cont.
Requirement 3, cont.

Date	Accounts	Debit	Credit
Dec. 31	Salaries Expenses—Selling	30,000	
	Salaries Expense—Administrative	10,000	
	Cash		40,000
31	Utilities Expense—Selling	1,920	
	Utilities Expense—Administrative	1,280	
	Cash		3,200

Requirement 5

Date	Accounts	Debit	Credit
Dec. 31	Adjusting Entries		
a.	Depreciation Expense—Selling	36,375	
	Depreciation Expense—Administrative	12,125	
	Accumulated Depreciation		48,500
b.	Supplies Expense—Administrative	400	
	Office Supplies		400
	$275 + $325 − $200		
	Supplies Expense—Selling	375	
	Warehouse Supplies		375
	$350 + $675 − $650		
c.	Cost of Goods Sold	205	
	Merchandise Inventory		205
	Shrinkage: (10 × $10) + (5 × $21)		

Comprehensive Problem, cont.
Requirement 6

Davis Lamp Company Adjusted Trial Balance December 31, 2018		
	Balance	
Account	**Debit**	**Credit**
Cash	$ 395,130	
Accounts Receivable	308,700	
Merchandise Inventory	305,795	
Office Supplies	200	
Warehouse Supplies	650	
Land	20,000	
Building	780,000	
Office Furniture and Equipment	125,000	
Warehouse Fixtures	260,000	
Accumulated Depreciation		$ 242,500
Accounts Payable		0
Common Stock		100,000
Retained Earnings		298,925
Dividends	50,000	
Sales Revenue		3,725,350
Cost of Goods Sold	1,526,655	
Salaries Expense—Selling	360,000	
Utilities Expense—Selling	37,022	
Supplies Expense—Selling	375	
Depreciation Expense—Selling	36,375	
Salaries Expense—Administrative	120,000	
Utilities Expense—Administrative	28,348	
Supplies Expense—Administrative	400	
Depreciation Expense—Administrative	12,125	
Total	$ 4,366,775	$ 4,366,775

Comprehensive Problem, cont.
Requirement 7

	Desk Lamps		Table Lamps		Floor Lamps	
	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount
Beginning Bal.	2,500	$ 20,000	3,000	$ 54,000	2,000	$ 52,000
Add: Purchases	10,000	95,000	17,500	352,500	7,500	197,500
Less: COGS	10,510	95,100	14,505	280,605	3,500	89,500
Ending Bal.	1,990	$ 19,900	5,995	$ 125,895	6,000	$ 160,000

Merchandise Inventory, general ledger	$ 305,795
Inventory Records:	
Desk Lamps	$ 19,900
Table Lamps	125,895
Floor Lamps	160,000
Total	$ 305,795

The balance in the general ledger matches the sum of the balances of the inventory records.

Comprehensive Problem, cont.
Requirement 8

DAVIS LAMP COMPANY
Income Statement
For Year Ended December 31, 2018

Net Sales Revenue			$ 3,725,350
Cost of Goods Sold			1,526,655
Gross Profit			2,198,695
Operating Expenses:			
Selling Expenses:			
Salaries Expense	$ 360,000		
Utilities Expense	37,022		
Supplies Expense	375		
Depreciation Expense	36,375		
Total Selling Expenses		$ 433,772	
Administrative Expenses:			
Salaries Expense	120,000		
Utilities Expense	28,348		
Supplies Expense	400		
Depreciation Expense	12,125		
Total Administrative Expenses		160,873	
Total Operating Expenses			594,645
Net Income			$ 1,604,050

DAVIS LAMP COMPANY
Statement of Retained Earnings
For Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 298,925
Net income for the year	1,604,050
	1,902,975
Dividends	(50,000)
Retained Earnings, December 31, 2018	$ 1,852,975

DAVIS LAMP COMPANY
Balance Sheet
December 31, 2018

Assets			
Current Assets:			
Cash		$ 395,130	
Accounts Receivable		308,700	
Merchandise Inventory		305,795	
Office Supplies		200	
Warehouse Supplies		650	
Total Current Assets			$ 1,010,475
Property, Plant, and Equipment:			
Land		20,000	
Building	$ 780,000		
Office Furniture and Equipment	125,000		
Warehouse Fixtures	260,000		
Less: Accumulated Depreciation	(242,500)	922,500	
Total Property, Plant and Equipment			942,500
Total Assets			$ 1,952,975
Liabilities			
Current Liabilities:			
Accounts Payable		$ 0	
Total Liabilities			$ 0
Stockholders' Equity			
Common Stock		100,000	
Retained Earnings		1,852,975	
Total Stockholders' Equity			1,952,975
Total Liabilities and Stockholders' Equity			$ 1,952,975

Comprehensive Problem, cont.
Requirement 9

Gross profit percentage is 59.02%. Inventory turnover is 7.07 times and days' sales in inventory is 52 days.

Calculations:

Gross profit percentage	=	Gross profit / Net Sales Revenue
	=	$ 2,198,695 / $ 3,725,350
	=	0.5902 = 59.02% (rounded)

Average merchandise inventory	=	(Beginning merchandise inventory + Ending merchandise inventory) / 2
	=	($126,000 + $305,795) / 2
	=	$215,898 (rounded)

Inventory turnover	=	Cost of goods sold / Average merchandise inventory
	=	$1,526,655 / $215,898
	=	7.07 times per year (rounded)

Days' sales in inventory	=	365 days / Inventory turnover
	=	365 days / 7.07 times
	=	52 days (rounded)

Comprehensive Problem, cont.
Requirement 10

Date	Accounts	Debit	Credit
Dec. 31	Sales Revenue	3,725,350	
	Income Summary		3,725,350
	To close revenue.		
31	Income Summary	2,121,300	
	Cost of Goods Sold		1,526,655
	Salaries Expense—Selling		360,000
	Utilities Expense—Selling		37,022
	Supplies Expense—Selling		375
	Depreciation Expense—Selling		36,375
	Salaries Expense—Administrative		120,000
	Utilities Expense—Administrative		28,348
	Supplies Expense—Administrative		400
	Depreciation Expense—Administrative		12,125
	To close expenses.		
31	Income Summary	1,604,050	
	Retained Earnings		1,604,050
	To close income summary.		
31	Retained Earnings	50,000	
	Dividends		50,000
	To close dividends.		

Comprehensive Problem, cont.
Requirement 11

Davis Lamp Company
Post-Closing Trial Balance
December 31, 2018

	Balance	
Account	**Debit**	**Credit**
Cash	$ 395,130	
Accounts Receivable	308,700	
Merchandise Inventory	305,795	
Office Supplies	200	
Warehouse Supplies	650	
Land	20,000	
Building	780,000	
Office Furniture and Equipment	125,000	
Warehouse Fixtures	260,000	
Accumulated Depreciation		$ 242,500
Accounts Payable		0
Common Stock		100,000
Retained Earnings		1,852,975
Total	$ 2,195,475	$ 2,195,475

Tying It All Together 6-1
Requirement 1

Merchandise inventory is found on the balance sheet in current asset section. As of January 30, 2016, Dick's Sporting Goods reported inventory of $1,527,187 (in thousands). The merchandise inventory as of January 31, 2015 was $1,390,767 (in thousands).

Requirement 2

Cost of Goods Sold is found on the income statement and represents the cost of merchandise inventory that has been sold by the business. Cost of Goods Sold is an expense, which is why it is reported on the income statement.

Requirement 3

The amount of profit that Dick's Sporting goods earns from selling its merchandise inventory would be reported on the income statement as Gross Profit. For the year ending January 30, 2016, Dick's reported gross profit of $2,182,887 (in thousands).

Decision Case 6-1

Strategies for doubling net income include the following:

- Analyze the mix and level of operating expenses to identify opportunities to increase efficiencies (via cost control) and effectiveness (via sales in excess of costs). This would include reducing costs by eliminating non-value-added activities (e.g., some general and administrative activities) and focusing on activities with the greatest likelihood of increasing sales and yielding returns in excess of the cost of resources invested (e.g., advertising, marketing, and promotion activities).
- Consider offering specialty high-quality products that yield higher profit margins (products that the nearby discount appliance store might not offer).
- Train employees in effective customer relationship skills to increase first-time sales, repeat business, and new business created by favorable word-of-mouth.
- Offer superior post-sales customer support using resources already available (no additional investment or new employees required).

Financial Statement Case 6-1
Requirement 1

Inventories is accounted for under the last-in, first-out method and are stated at the lower of cost or market.

Requirement 2

Target's net purchases of inventory were $52,316 (in millions) during the year ended January 30, 2016.

Calculations:

Beginning Inventory + Net Purchases – Ending Inventory = Cost of Goods Sold

Thus:

Net Purchases = Ending Inventory + Cost of Goods Sold – Beginning Inventory

= $8,601 + $51,997 – $8,282

= $52,316

(Dollar amounts in millions)

Requirement 3

For the fiscal year ended January 30, 2016, Kohl's Corporation had an inventory turnover of 3.12 times and days' sales in inventory of 117.0 days.

For the fiscal year ended January 30, 2016, Target's inventory turnover is 6.2 times, and days' sales in inventory is 58.9 days.

Kohl's inventory turnover (3.12 times) is lower than that of Target (6.2 times) and Kohl's days' sales in inventory (117.0 days) is higher than that of Target (58.9 days). Both measures for Target compare favorably to Kohl's. Target sold its average level of inventory more times than did Kohl's, and Target held its average inventory for a shorter time than did Kohl's.

Financial Statement Case 6-1, cont.
Requirement 3, cont.

Calculations:

Target
Fiscal year ended January 30, 2016 (in millions):

Average inventory	=	(Beginning inventory + Ending inventory) / 2
	=	($8,282 + $8,601) / 2
	=	$8,441.5

Inventory turnover	=	Cost of goods sold / Average inventory
	=	$51,997 / $8,441.5
	=	6.2 times for the year

Days' sales in inventory	=	365 days / Inventory turnover
	=	365 days / 6.2 times
	=	58.9 days

Team Project 6-1

Students' answers will vary since different annual reports will be obtained.

7 Internal Control and Cash

Where Did the Cash Go?

Andrew Goard, chief financial officer of a sports-themed restaurant located in Brentwood, California, stared at the bank statement on his desk. The business recently experienced record-breaking revenue due to increased customer traffic and expanded menu and drink offerings. Andrew knew that the expenses of the business had also increased, but he had expected the cash in the business's checking account to increase, not decrease, as the bank statement was showing.

Andrew wondered if it was possible that one of his employees was stealing money from the cash register. He really liked all of his employees and didn't think that any of them would steal from the business. But the deposits on the bank statement from customer sales just didn't make sense. Given the increased sales, the cash deposits should have been much higher.

Andrew knew that it was his responsibility to ensure that procedures were put into place to be sure the cash and other assets of the business remained secure. He had thought that completing employee background checks was enough to prevent the theft of the business's assets, but he now suspected that further controls needed to be put into place. Andrew began by reviewing the bank statement and comparing it to the cash records on hand. In doing this, he identified that cash was indeed being stolen from the business by the employee who was responsible for making the daily cash deposits. Andrew realized, though, that it wasn't enough to fire the employee responsible; he needed to put into place security measures that would decrease the likelihood of employee theft happening again.

What Are Internal Controls?

Safeguarding and securing assets should be a concern of all businesses—no matter how small or large the business is. The procedures that businesses put into place to protect their assets are called *internal controls* and are a key management responsibility. For example, **Buffalo Wild Wings, Inc.,** a company that owns and operates Buffalo Wild Wings, R Taco, and PizzaRev restaurants, must assure its investors that proper controls have been put into place to protect its assets, promote operational efficiency, and ensure accurate and reliable accounting records. In this chapter, we look at the policies and procedures that companies such as Buffalo Wild Wings use to fulfill this responsibility.

Chapter 7 Learning Objectives

1 Define internal control and describe the components of internal control and control procedures

2 Apply internal controls to cash receipts

3 Apply internal controls to cash payments

4 Explain and journalize petty cash transactions

5 Explain and journalize credit card sales

6 Demonstrate the use of a bank account as a control device and prepare a bank reconciliation and related journal entries

7 Use the cash ratio to evaluate business performance

WHAT IS INTERNAL CONTROL, AND HOW CAN IT BE USED TO PROTECT A COMPANY'S ASSETS?

Learning Objective 1
Define internal control and describe the components of internal control and control procedures

A key responsibility of a business manager is to control operations. Owners set goals, hire managers to lead the way, and hire employees to carry out the business plan. **Internal control** is the organizational plan and all the related measures designed to accomplish the following:

Internal Control
The organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

1. **Safeguard assets.** A company must protect its assets; otherwise it is throwing away resources. If you fail to safeguard cash, the most liquid of assets, it will quickly slip away.
2. **Encourage employees to follow company policies.** Everyone in an organization needs to work toward the same goals. It is important for a business to identify policies to help meet the company's goals. These policies are also important for the company to ensure that all customers are treated similarly and that results can be measured effectively.
3. **Promote operational efficiency.** Businesses cannot afford to waste resources. Businesses work hard to make sales and do not want to waste any of the benefits. Promoting operational efficiency reduces expenses and increases business profits.
4. **Ensure accurate, reliable accounting records.** Accurate, reliable accounting records are essential. Without reliable records, managers cannot tell which part of the business is profitable and which part needs improvement. A business could be losing money on every product sold and not realize it—unless it keeps accurate and reliable records.

Internal Control and the Sarbanes-Oxley Act

Internal controls are critical for all companies. Several organizations and laws have helped shape the way companies carry out internal controls. The **Committee of Sponsoring Organizations (COSO)**, for example, provides thought leadership related to enterprise risk management, internal control, and fraud deterrence. COSO's mission is to develop frameworks and guidance to help companies improve their internal controls and reduce fraud in organizations. **Public companies**—one that sells its stock to the general public—are required by the U. S. Congress to maintain a system of internal controls.

Committee of Sponsoring Organizations (COSO)
A committee that provides thought leadership related to enterprise risk management, internal control, and fraud deterrence.

Public Company
A company that sells its stock to the general public.

The Enron Corporation and WorldCom accounting scandals rocked the United States in the early years of this millennium. Enron overstated profits and went out of business almost overnight. WorldCom reported expenses as assets and overstated both profits and assets. The same accounting firm, Arthur Andersen LLP, had audited both companies' financial statements. Arthur Andersen voluntarily closed its doors in 2002 after nearly 90 years in public accounting.

Sarbanes-Oxley Act (SOX)
Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports.

Internal Control Report
A report by management describing its responsibility for and the adequacy of internal controls over financial reporting.

IFRS

To be IFRS compliant, foreign companies are not required to have their internal controls audited by outside auditors. While all companies have internal controls, foreign companies do not have the added expense of an audit of their internal controls. On the other hand, readers of the financial reports of foreign companies have no assurance that the controls are effective.

As the scandals unfolded, many people asked, "How could this happen? Where were the auditors?" To address public concern, Congress passed the **Sarbanes-Oxley Act**, abbreviated as **SOX.** This act requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports. SOX revamped corporate governance in the United States and affected the accounting profession. Here are some of the SOX provisions:

1. Public companies must issue an **internal control report**, which is a report by management describing its responsibility for and the adequacy of internal controls over financial reporting. Additionally, an outside auditor must evaluate the client's internal controls and report on the internal controls as part of the audit report.
2. A new body, the Public Company Accounting Oversight Board (PCAOB), oversees the work of auditors of public companies.
3. Accounting firms are not allowed to audit a public company and also provide certain consulting services for the same client.
4. Stiff penalties await violators—25 years in prison for securities fraud and 20 years for an executive making false sworn statements.

The Sarbanes-Oxley Act changed the rules for auditors, limiting what services they can perform in addition to the audit and requiring a report on the internal controls of each public company audited. How does a business achieve good internal control? The next section identifies the components of internal control.

The Components of Internal Control

A business can achieve its internal control objectives by addressing the five components listed below:

- **C**ontrol procedures
- **R**isk assessment
- **I**nformation system
- **M**onitoring of controls
- **E**nvironment

You can remember the five components of internal control by using the acronym CRIME.

Control Procedures

Control procedures are designed to ensure that the business's goals are achieved. The next section, "Internal Control Procedures," discusses the procedures in greater detail.

Risk Assessment

A company must identify its risks. For example, food manufacturers face the risk that their food products may harm people; airplane carrier businesses face the possibility that planes may crash; music companies face copyright infringement risks; and all companies face the risk of bankruptcy. Companies facing difficulties might be tempted to falsify their financial statements to make themselves look better than they really are. As part of the internal control system, the company's business risk, as well as the risk concerning individual accounts, must be assessed. The higher the risk, the more controls a company must put in place to safeguard its assets and accounting records.

Information System

As we have seen, the information system is critical. Controls must be in place within the information system to ensure that only authorized users have access to various parts of the accounting information system. Additionally, controls must be in place to ensure adequate

approvals for recorded transactions are required. The decision makers need accurate information to keep track of assets and measure profits and losses.

Monitoring of Controls

Companies hire auditors to monitor their controls. An **internal auditor** is an employee of the business who ensures that the company's employees are following company policies and that operations are running efficiently. Internal auditors also determine whether the company is following legal requirements for internal controls to safeguard assets. An **external auditor** is an outside accountant who is completely independent of the business. External auditors evaluate the controls to ensure that the financial statements are presented fairly, in accordance with Generally Accepted Accounting Principles (GAAP).

Internal Auditor
An employee of the business who ensures the company's employees are following company policies, that the company meets all legal requirements, and that operations are running efficiently.

External Auditor
An outside accountant, completely independent of the business, who evaluates the controls to ensure that the financial statements are presented fairly in accordance with GAAP.

Environment

The environment is the "tone at the top" or the culture of the business. It starts with the CFO or CEO and the top managers. They must behave honorably to set a good example for company employees. Each must demonstrate the importance of internal controls if he or she expects the employees to take the controls seriously.

Internal Control Procedures

Whether the business is a small business that generates less than $10,000 in annual sales or a large business generating $10 billion in annual sales, all companies need the following internal control procedures:

Competent, Reliable, and Ethical Personnel

Employees should be competent, reliable, and ethical. Paying good salaries will attract high-quality employees. Employees should also be trained to do the job, and their work should be adequately supervised.

Assignment of Responsibilities

In a business with good internal controls, no duty is overlooked. Each employee has certain, carefully defined responsibilities. For example, in a large company, the person in charge of signing checks is called the *treasurer*. The chief accounting officer is called the *controller*. Even an entry-level bookkeeper, whose job includes recording accounting transactions accurately, has clear responsibilities. This assignment of responsibilities creates job accountability, thus ensuring all important tasks get done.

Separation of Duties

Smart management policies divide responsibilities between two or more people. **Separation of duties** limits fraud and promotes the accuracy of the accounting records. Separation of duties can be divided into two parts:

Separation of Duties
Dividing responsibilities between two or more people to limit fraud and promote accuracy of accounting records.

1. **Separating operations from accounting.** Accounting should be completely separate from the operating departments, such as production and sales. What would happen if sales personnel recorded the company's revenue? Sales figures could be inflated, and then top managers would not know how much the company actually sold.
2. **Separating the custody of assets from accounting.** Accountants must not handle cash, and cashiers must not have access to the accounting records. If one employee has both duties, that employee could steal cash and conceal the theft in the accounting records. The treasurer of a company handles cash, and the controller accounts for the cash. Neither person has both responsibilities. This control applies to all assets, not just cash.

Audits

To assess the adequacy and accuracy of their accounting records, most companies perform both internal and external audits. Remember that an audit is an examination of a company's financial statements and accounting system by a trained accounting professional called an *auditor*. Internal audits are performed by employees of the company. External audits are performed by independent auditors who are not employees of the company.

To evaluate the accounting system, auditors must examine the internal controls and test them to ensure the controls are working properly. For example, a control might require authorization by a manager for payments more than $50. An auditor would check a sample of payments greater than $50 to determine whether all payments were properly authorized by a manager.

Documents

Documents provide the details of business transactions and include invoices and orders, which may be paper or electronic. Documents should be prenumbered to prevent theft and inefficiency. A gap in the numbered sequence draws attention.

For example, for Smart Touch Learning, a key document is the sales invoice. The manager can compare the total cash sales on the invoices with the amount of cash received and deposited into the bank account.

Electronic Devices

Accounting systems are relying less on paper documents and more on electronic documents and digital storage devices. For example, retailers control inventory by attaching an electronic sensor to merchandise. The cashier removes the sensor after a sale is made. If a customer tries to leave the store with the sensor attached, an alarm sounds. Devices such as these can significantly reduce theft.

E-Commerce

E-commerce creates its own unique types of risks. Hackers may gain access to confidential information, such as account numbers and passwords, or introduce computer viruses, Trojans, or phishing expeditions. To address the risks posed by e-commerce, companies have devised a number of security measures. One technique for protecting customer data is encryption. **Encryption** rearranges plain-text messages by a mathematical process. The encrypted message cannot be read by those who do not know the code. An accounting encryption example uses check-sum digits for account numbers. Each account number has its last digit equal to the sum of the previous digits. For example, consider customer number 2237, where $2 + 2 + 3 = 7$. Any account number failing this test triggers an error message.

Encryption
Rearranging plain-text messages by a mathematical process—the primary method of achieving security in e-commerce.

Another technique for protecting data is firewalls. **Firewalls** limit access into a local network. Members can access the network, but nonmembers cannot. Usually several firewalls are built into the system. At the point of entry, additional security measures, such as passwords, PINs (personal identification numbers), and signatures are used. For additional security, more sophisticated firewalls are used deeper in the network to protect more sensitive data.

Firewall
A device that enables members of a local network to access the network, while keeping nonmembers out of the network.

DECISIONS

What e-commerce internal controls should be put into place?

Jason Kane works as an information technology auditor for Netproducts, a retailer that sells merchandise over the Internet. Jason has been assigned the responsibility of reviewing the existing procedures and suggesting internal controls that could best protect the company. Netproducts sells all its merchandise over the Internet and accepts only credit card payments. Netproducts tracks trend information about its sales and maintains all customer, product, and pricing information on the company's intranet. In addition, Netproducts keeps employee information such as annual leave, payroll deposits, and Social Security numbers on its intranet. What e-commerce controls should Jason suggest?

Solution

Jason should suggest that specific controls be put into place, such as using encryption technology and firewalls, to protect customer and employee information. He should recommend that customers be required to create an online account with a password for the site and that the company only use secured Internet networks. In addition, Netproducts should ensure that the customer and employee data are physically secured and that access to the data can be obtained only by authorized individuals.

Other Controls

The types of other controls are as endless as the types of businesses that employ them. Some examples of other common controls include the following:

- Fireproof vaults to store important documents
- Burglar alarms, fire alarms, and security cameras
- Loss-prevention specialists who train company employees to spot suspicious activity
- Fidelity bonds to reimburse the company for any losses due to employee theft
- Mandatory vacations and job rotation

The Limitations of Internal Control—Costs and Benefits

Unfortunately, most internal controls can be overcome. **Collusion**—two or more people working together—can beat internal controls. For example, consider the following scenario with Galaxy Theater. Ralph and Lana, employees of Galaxy Theater, can design a scheme in which Ralph, the ticket seller, sells tickets and pockets the cash from 10 customers. Lana, the ticket taker, admits 10 customers to the theater without taking their tickets. Ralph and Lana split the cash. Ralph and Lana have colluded to circumvent controls, resulting in Galaxy Theater losing revenues. To prevent this situation, the manager must take additional steps, such as matching the number of people in the theater against the number of ticket stubs retained, which takes time away from the manager's other duties. It is difficult and costly to plan controls that can prevent collusion.

Collusion
Two or more people working together to circumvent internal controls and defraud a company.

The stricter the internal control system, the more it costs. A complex system of internal control can strangle the business with red tape. How tight should the controls be? Internal controls must always be judged in light of their costs versus their benefits. Following is an example of a positive cost–benefit relationship: A security guard at a retail store costs about $28,000 a year. On average, each guard prevents about $50,000 of theft each year. The net savings to the retail store is $22,000. An example of a negative cost–benefit relationship would be paying the same security guard $28,000 a year to guard a $1,000 cash drawer. The cost exceeds the benefit by $27,000.

So far we have discussed what internal control is and how it can be used to protect a company's assets. We will now spend the remainder of the chapter concentrating on cash because it is the asset most likely to be stolen. However, it is important to remember that internal controls should be applied to all assets, not just cash.

Try It!

Match the accounting terminology to the definitions.

1. Sarbanes-Oxley Act
2. Internal control
3. Encryption
4. Separation of duties
5. Internal auditors

a. Organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

b. Employees of the business who ensure that the company's employees are following company policies and meeting legal requirements and that operations are running efficiently.

c. Rearranging plain-text messages by a mathematical process—the primary method of achieving security in e-commerce.

d. Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports.

e. Dividing responsibilities between two or more people.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S7-1. MyAccountingLab

WHAT ARE THE INTERNAL CONTROL PROCEDURES WITH RESPECT TO CASH RECEIPTS?

Learning Objective 2
Apply internal controls to cash receipts

Cash receipts occur primarily when a business sells merchandise or services. All cash receipts should be deposited in the bank for safekeeping shortly after the cash is received. Companies receive cash either over the counter, through the mail, or by electronic funds transfer. Each source of cash has its own security measures. We have already discussed internal control procedures for e-commerce, so this section focuses on over-the-counter and mailed cash receipts.

Cash Receipts Over the Counter

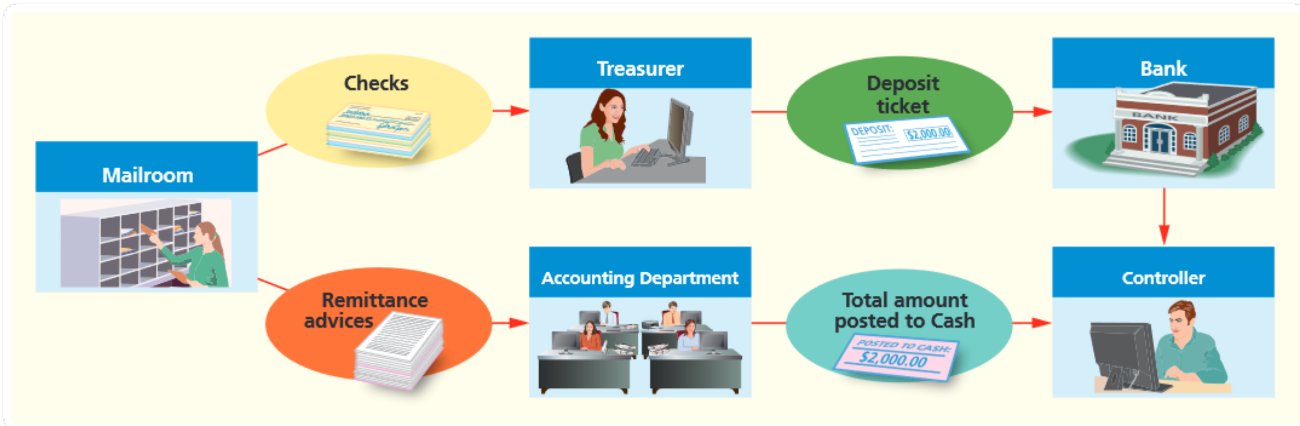
A cash receipt over the counter in a store involves a point-of-sale terminal (cash register) that provides control over the cash receipts. Consider a retail store. For each transaction, the retail store issues a receipt to ensure that each sale is recorded. The cash drawer opens after the clerk enters a transaction, and the machine (cash register) records it. At the end of the day, a manager proves the cash by comparing the cash in the drawer against the machine's record of cash sales. This step helps prevent theft by the clerk.

At the end of the day—or several times a day if business is brisk—the manager deposits the cash in the bank. The machine tape then goes to the accounting department to record the journal entry for cash receipts and sales revenue. These measures, coupled with oversight by a manager, discourage theft.

Cash Receipts by Mail

Many companies receive checks by mail for payments of services or merchandise. Checks sent via mail are considered to be cash receipts. Exhibit 7-1 shows how companies control cash received by mail.

Exhibit 7-1 | **Cash Receipts by Mail**



The process works like this:

Step 1: All incoming mail is opened by a mailroom employee. The mailroom then sends all customer checks to the treasurer and all remittance advices to the accounting department. A **remittance advice** is an optional attachment to a check that tells the business the reason for the payment.

Remittance Advice
An optional attachment to a check that tells the business the reason for the payment.

Step 2: The treasurer has the cashier deposit the checks in the bank. The cashier receives a deposit receipt.

Step 3: The accounting department (or bookkeeper) uses the remittance advices to record the journal entries to Cash and customer accounts.

Step 4: As a final control, the controller compares the following records for the day:

- Bank deposit amount from the treasurer
- Debit to Cash from the accounting department

The debit to Cash should equal the amount deposited in the bank. If it does, all cash receipts are safe in the bank, and the company's books are up to date.

Many companies use a **lock-box system** as an alternative to accepting cash or checks via the mail or over the counter. In a lock-box system, customers send their checks directly to a post office box that belongs to a bank. A bank employee empties the box daily and records the deposits into the company's bank account. Internal control is tight because company personnel never touch incoming cash. The lock-box system puts a business's cash into the company's bank account quickly.

Lock-Box System
A system in which customers send their checks to a post office box that belongs to a bank. A bank employee empties the box daily and records the deposits into the company's bank account.

Try It!

6. Fill in the missing information concerning how companies control cash received by mail.

a. The _________ opens the mail and sends customer checks to the treasurer.
b. The _________ deposits the customer checks in the bank.
c. The _________ uses the remittance advices to record the journal entries for cash receipts.
d. The _________ compares the bank deposit to the journal entry for cash receipts.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S7-2 and S7-3. MyAccountingLab

WHAT ARE THE INTERNAL CONTROL PROCEDURES WITH RESPECT TO CASH PAYMENTS?

Learning Objective 3
Apply internal controls to cash payments

Companies make many payments by check. They also pay small amounts from a petty cash fund, which is discussed later in the chapter. Let's begin by discussing cash payments by check.

Controls Over Payment by Check

Companies need a good separation of duties between the operations of the business and writing checks for cash payments. Payment by check is an important internal control for the following reasons:

- The check provides a record of the payment.
- The check must be signed by an authorized official.
- Before signing the check, the official reviews the invoice or other evidence supporting the payment.

Controls Over Purchases and Payments

To illustrate the internal control over cash payments by check, suppose Smart Touch Learning buys its tablets from an electronics manufacturer. The purchasing and payment process follows these steps, as shown in Exhibit 7-2.

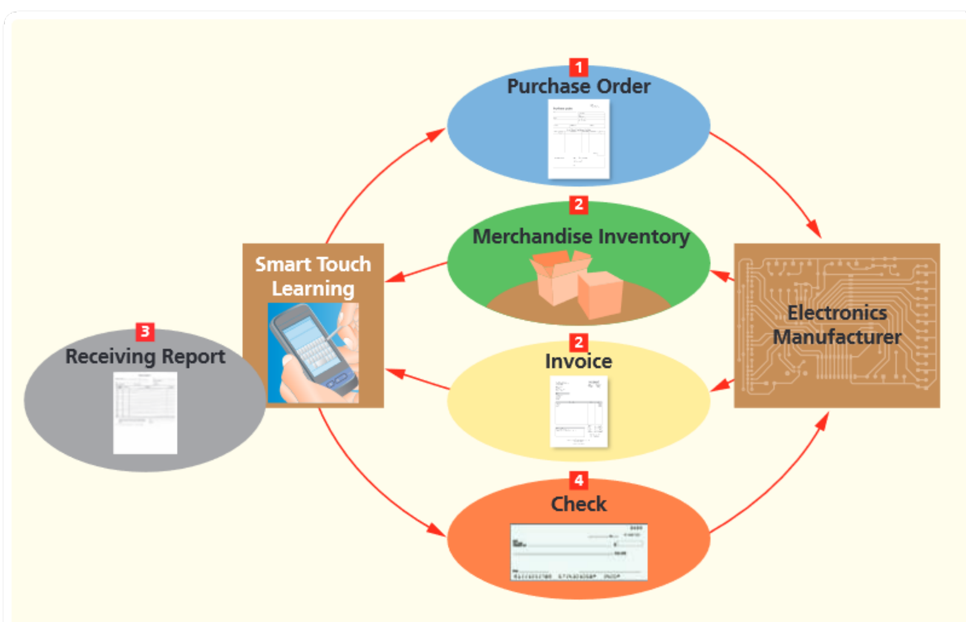
Step 1: Smart Touch Learning sends a purchase order to the electronics manufacturer that contains the quantity and type of goods needed.

Step 2: The electronics manufacturer ships the inventory and sends an invoice back to Smart Touch Learning.

Step 3: Smart Touch Learning receives the inventory and prepares a receiving report.

Step 4: After approving all documents, Smart Touch Learning sends a check to the electronics manufacturer.

Exhibit 7-2 | **Cash Payments by Check**

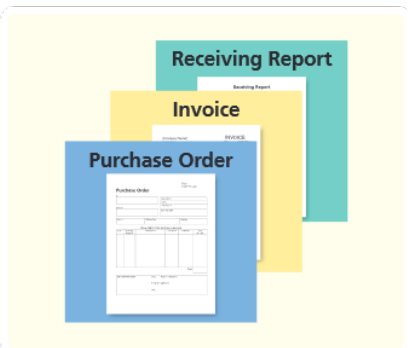


For good internal control, the purchasing agent (the employee who prepares the purchase order) should neither receive the goods nor approve the payment. If these duties are not separated, a purchasing agent could buy goods and have them shipped to his or her home. Or a purchasing agent could overpay for purchases, approve the payment, and split the excess with the supplier.

Exhibit 7-3 shows Smart Touch Learning's payment packet of documents, which may be in either electronic or paper format. Before signing the check for payment of goods, the controller or the treasurer should examine the packet to prove that all the documents agree. Only then does the company know the following:

1. It received the goods ordered.
2. It is paying only for the goods received and authorized.
3. It is paying the correct amount.

Exhibit 7-3 | **Payment Packet**



After payment, the payment packet is marked as paid to prevent the bill from being paid twice. Electronically paid invoices are automatically marked "paid" by most accounting systems.

Streamlined Procedures

Technology is streamlining payment procedures. **Evaluated receipts settlement (ERS)** compresses the payment approval process into a single step by comparing the receiving report to the purchase order. If those documents match, then Smart Touch Learning got the tablets it ordered and payment is made to the vendor.

An even more streamlined process bypasses paper documents altogether. In **electronic data interchange (EDI)**, a retailer's computers communicate directly with the computers of suppliers. When the retailer's inventory reaches a low level, the computer creates and sends an electronic purchase order to the supplier. The supplier then ships the inventory and electronically sends an invoice to the retailer. A manager approves the invoice, and then an electronic fund transfer (EFT) sends the retailer's payment to the supplier. These streamlined EDI procedures are used for both cash payments and cash receipts in many companies.

Evaluated Receipts Settlement (ERS)
A procedure that compresses the payment approval process into a single step by comparing the receiving report to the purchase order.

Electronic Data Interchange (EDI)
A streamlined process that bypasses paper documents altogether. Computers of customers communicate directly with the computers of suppliers to automate routine business transactions.

Try It!

7. Fill in the missing information.

a. The vendor ships the inventory and sends a(n) __________ back to the purchaser.
b. After approving all documents, the purchaser sends a(n) __________ to the vendor.
c. When ordering merchandise inventory, the purchaser sends a(n) __________ to the vendor.
d. The purchaser receives the inventory and prepares a(n) __________.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S7-4. MyAccountingLab

HOW CAN A PETTY CASH FUND BE USED FOR INTERNAL CONTROL PURPOSES?

Learning Objective 4
Explain and journalize petty cash transactions

Petty Cash
A fund containing a small amount of cash that is used to pay for minor expenditures.

It is not cost effective for a business to write a check for a taxi fare or the delivery of a package across town. To meet these needs and to streamline record keeping for small cash transactions, companies keep cash on hand to pay small amounts. This fund is called **petty cash**.

We have already established that cash is the most liquid of assets. Petty cash is more liquid than cash in the bank because none of the bank controls are in place. Therefore, petty cash needs controls such as the following:

- Designate a custodian of the petty cash fund. The custodian is the individual assigned responsibility for the petty cash fund.
- Designate a specific amount of cash to be kept in the petty cash fund.
- Support all petty cash fund payments with a petty cash ticket. These tickets are sequentially numbered. The petty cash ticket serves as an authorization voucher and explanation.

Setting Up the Petty Cash Fund

The petty cash fund is opened when the company writes a check for the designated amount. The company makes the check payable to Petty Cash. Suppose on August 1, Smart Touch Learning creates a petty cash fund of $200. The custodian cashes the $200 check and places the currency in the fund box. The journal entry is as follows:

A↑↓		L + E
Petty Cash↑ Cash↓	=	

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Petty Cash	200	
	Cash		200
	To open the petty cash fund.		

For each petty cash payment, the custodian prepares a petty cash ticket like the one in Exhibit 7-4.

Exhibit 7-4 | Petty Cash Ticket

PETTY CASH TICKET #101

Date Aug 25, 2019

Amount $60

For Letterhead invoices

Debit Office Supplies

Received by *Lewis Wright* Fund Custodian *MAR*

Signatures (or initials) identify the recipient of the cash and the fund custodian. The custodian keeps the petty cash tickets in the fund box. The sum of the cash plus the total of the petty cash tickets should equal the fund balance, $200, at all times.

Maintaining the Petty Cash account at its designated balance is the nature of an **imprest system**. The imprest system requires that, at any point in time, the petty cash box contain cash and petty cash tickets that total the amount of the imprest balance. This clearly identifies the amount of cash for which the custodian is responsible, and it is the system's main internal control feature.

Imprest System
A way to account for petty cash by maintaining a constant balance in the petty cash account. At any time, cash plus petty cash tickets must total the amount allocated to the petty cash fund.

Replenishing the Petty Cash Fund

Payments decrease the fund, so periodically the fund must be replenished. Suppose that on August 31, the petty cash fund holds $118 in cash and $80 in petty cash tickets (ticket no. 101 for $60 for office supplies and ticket no. 102 for $20 for a delivery).

You can see $2 is missing:

Fund balance		$ 200
Cash on hand	$ 118	
Petty cash tickets	80	
Total accounted for		198
Amount of cash missing		$ 2

To replenish the petty cash fund, you need to bring the cash on hand up to $200. The company writes a check, payable to Petty Cash, for $82 ($200 imprest balance – $118 cash on hand). The fund custodian cashes this check and puts $82 back in the fund box. Now the fund box holds $200 cash as it should.

The petty cash tickets tell you what to debit and the check amount tells you what to credit, as shown in this entry to replenish the fund:

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Office Supplies	60	
	Delivery Expense	20	
	Cash Short & Over	2	
	Cash		82
	To replenish the petty cash fund.		

A↓	=	L +	E↓
Office Supplies↑ Cash↓	=		Delivery Expense↑ Cash Short & Over↑

Why wasn't Petty Cash debited when the fund was replenished?

Missing petty cash funds are debited to a new account, Cash Short & Over. In this case, $2 was missing, so we debit Cash Short & Over for the missing petty cash. Another way to look at this is that we needed another $2 debit to make the journal entry balance.

The Petty Cash account keeps its $200 balance at all times. **The Petty Cash account is used in a journal entry only when the fund is started (see the August 1 entry) or when its amount is increased or decreased.** If the business increases the fund amount from $200 to $250, this would require a check to be cashed for $50 and the debit would be to Petty Cash. **When replenishing the fund, the company debits either the associated expense incurred or the asset purchased with the funds.**

At times the sum of cash in the petty cash fund plus the tickets may exceed the fund balance. Consider the previous example. Assume the petty cash ticket no. 102 for delivery was for $30 instead of $20. Because we know the amount of the petty cash tickets and the amount of cash on hand, we can find out the amount of cash shortage or overage.

Fund balance		$ 200
Cash on hand	$ 118	
Petty cash tickets	90	
Total accounted for		208
Amount of cash overage		$ 8

In this case, the cash on hand plus petty cash tickets ($208) is more than the fund balance ($200). A cash overage exists. The journal entry to replenish the fund would be:

A↓	=	L	+	E↓
Office Supplies↑ Cash↓				Delivery Expense↑ Cash Short & Over↓

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Office Supplies	60	
	Delivery Expense	30	
	Cash Short & Over		8
	Cash		82
	To replenish the petty cash fund.		

We know the total debits are $90 ($60 + $30). We know the check to replenish the fund was still $82 (credit to Cash) because the fund balance should total $200 and there was $118 in the petty cash box. For this situation, we need an $8 credit to make the journal entry balance, a gain, which is credited to Cash Short & Over.

Changing the Amount of the Petty Cash Fund

Suppose that on September 1, Smart Touch Learning decides to increase the amount of the petty cash fund from $200 to $300. In order to increase the fund, Smart Touch Learning must write a check for the additional $100, cash the check, and place the additional currency in the petty cash box. Because the amount of the fund has changed, the company must record the following journal entry showing this change:

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Petty Cash	100	
	Cash		100
	To increase the petty cash fund.		

A↑↓	=	L + E
Petty Cash↑ Cash↓		

Had the Petty Cash fund been decreased, the debit would've been to Cash and the credit to the Petty Cash account. Remember that the only time the Petty Cash account is used in the journal entry is when the account is established, increased, or decreased.

Try It!

8. The following petty cash transactions of Green Golf Equipment occurred in May:

May 1	Established a petty cash fund with a $200 balance.
31	The petty cash fund has $18 in cash and $180 in petty cash tickets that were issued to pay for Office Supplies ($81), Delivery Expense ($36), Postage Expense ($54), and Miscellaneous Expense ($9). The petty cash custodian replenished the fund and recorded the expenses.

Prepare the journal entries.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S7-5. MyAccountingLab

HOW ARE CREDIT CARD SALES RECORDED?

Learning Objective 5
Explain and journalize credit card sales

In addition to receiving cash receipts from customers over the counter, most companies also accept credit cards and debit cards. By accepting credit cards and debit cards, such as Visa, MasterCard, and American Express, businesses are able to attract more customers. Credit cards offer the customer the convenience of buying something without having to pay cash immediately. Debit cards, on the other hand, reduce the customer's bank account immediately but allow the customer to pay electronically instead of with currency or by writing a check.

Companies hire a third-party processor to process credit and debit card transactions. Transactions are usually entered into an electronic terminal (card scanner) that the company either purchases or rents from the processor. The fees the card processor charges the company for its processing services vary depending on the type of card and the specific agreement the company has with the card processor. The processor agreement specifies how fees are paid to the processor. The following are two common methods of handling the proceeds and processing fees:

- **Net**—The total sale less the processing fee assessed equals the net amount of cash deposited by the processor, usually within a few days of the sale date.
- **Gross**—The total sale is deposited daily within a few days of the actual sale date. The processing fees for all transactions processed for the month are deducted from the company's bank account by the processor, often on the last day of the month.

Proceeds from credit and debit card transactions are usually deposited within a few business days after the sale. Therefore, credit and debit card sales are journalized similar to cash sales. For example, Smart Touch Learning sells merchandise inventory (ignore Cost of Goods Sold) to a customer for $3,000 on August 15. The customer pays with a third-party credit card. Smart Touch Learning would record the entry, assuming the card processor assesses a 4% fee and deposits the net amount, as follows:

A↑		L	+	E↑
Cash↑	=			Sales Revenue↑ Credit Card Expense↑

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Cash	2,880	
	Credit Card Expense ($3,000 × 0.04)	120	
	Sales Revenue		3,000
	Recorded credit card sales, net of fee.		

The same entry, assuming the processor uses the gross method, on the sale date would be as follows:

A↑		L	+	E↑
Cash↑	=			Sales Revenue↑

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Cash	3,000	
	Sales Revenue		3,000
	Recorded credit card sales.		

At the end of August, the processor would collect the fees assessed for the month. (*Note:* We assume only the one credit card sale for this month.)

A↓		L	+	E↓
Cash↓	=			Credit Card Expense↑

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Credit Card Expense	120	
	Cash		120
	Paid fees assessed by credit card processor.		

TYING IT ALL TOGETHER

Buffalo Wild Wings, Inc. owns and operates more than 550 Buffalo Wild Wings, R Taco, and PizzaRev restaurants. The restaurant Buffalo Wild Wings features a variety of boldly-flavored, crave-able menu items including Buffalo, New York-style chicken wings in 16 signature sauces and 5 signature seasonings. R Taco is a fast casual taco concept that offers a variety of tacos at an affordable price. Lastly, PizzaRev empowers guests to craft their own custom personal pizza, using fresh ingredients and homemade pizza dough. (You can find Buffalo Wild Wings, Inc.'s annual report at https://www.sec.gov/Archives/edgar/data/1062449/000106244916000052/bwld2015122710-k.htm)

How does Buffalo Wild Wings, Inc. ensure the security of its credit and debit card payments?

In the notes to the financial statements, Buffalo Wild Wings, Inc. states the company maintains the highest level of Payment Card Industry (PCI) Data Security Standard compliance at its restaurants. These standards require the company to build and maintain a secure network, protect cardholder data, use and regularly update antivirus software, implement strong access controls, regularly monitor and test networks, and maintain policies that address information security for employees.

Who is responsible for the internal controls and what could happen if the internal controls fail?

According to the notes in the financial statements, the management of Buffalo Wild Wings is responsible for establishing and maintaining effective internal control. Internal controls are meant to provide reasonable assurance regarding the reliability of financial reporting. Failure to maintain internal controls could limit the ability of the company to report accurate financial results and detect and prevent fraud. If significant enough, a failure of internal controls could cause a loss of investor confidence and a decline in market price of the company's stock.

Try It!

Phoenix Restaurants accepts credit and debit cards as forms of payment. Assume Phoenix had $12,000 of credit and debit card sales on June 30, 2017.

9. Suppose Phoenix's processor charges a 2% fee and deposits sales net of the fee. Journalize the sale transaction for the restaurant.
10. Suppose Phoenix's processor charges a 2% fee and deposits sales using the gross method. Journalize the sale transaction for the restaurant.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S7-6. MyAccountingLab

HOW CAN THE BANK ACCOUNT BE USED AS A CONTROL DEVICE?

Learning Objective 6
Demonstrate the use of a bank account as a control device and prepare a bank reconciliation and related journal entries

Cash is the most liquid asset reported on the balance sheet because it is the medium of exchange. Because cash is easy to conceal and relatively easy to steal, businesses keep their cash in a bank account. The bank has established practices for safeguarding the business's money. This section identifies the most common controls applied to a bank account.

Signature Card

Banks require each person authorized to sign on an account to provide a **signature card**. This helps protect against forgery because the signature card should be checked frequently by bank personnel to authenticate written checks or deposits made by the business.

Signature Card
A card that shows each authorized person's signature for a bank account.

Deposit Ticket

Banks supply standard forms such as a deposit ticket. Completed by the customer, the **deposit ticket** shows the amount of each deposit. As proof of the transaction, the customer receives a deposit receipt from the bank.

Deposit Ticket
A bank form that is completed by the customer and shows the amount of each deposit.

Check

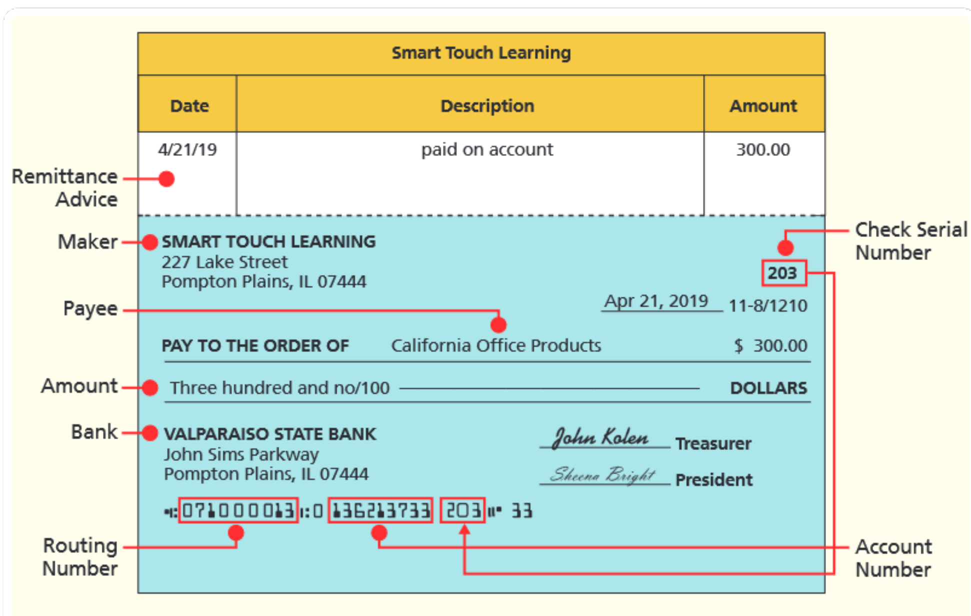
To pay cash, the depositor writes a **check,** which is a prenumbered document that tells the bank to pay the designated party a specified amount. Exhibit 7-5 shows a check drawn by Smart Touch Learning. There are three parties to a check: the maker, payee, and bank. The **maker** is the issuer of the check, in this case, Smart Touch Learning. The **payee** (California Office Products) is the individual or business to whom the check is paid.

Check
A document that instructs a bank to pay the designated person or business a specified amount of money.

Maker
The party who issues the check.

Payee
The individual or business to whom the check is paid.

Exhibit 7-5 | **Check with Remittance Advice**



An easy way to remember the difference between the maker and the payee is the maker is the party who is making the promise that the cash is available in the bank to settle the check.

This check has two parts, the check itself and the remittance advice. In addition, the check includes the routing number and account number. The **routing number** is a 9-digit number that identifies the bank upon which the payment is drawn. The **account number** identifies the account upon which the payment is drawn.

Routing Number
On a check, the 9-digit number that identifies the bank upon which the payment is drawn.

Account Number
On a check, the number that identifies the account upon which the payment is drawn.

Bank Statement

Banks send monthly statements to customers either electronically or in the mail. A **bank statement** reports the activity in the customer's account. The statement shows the account's beginning and ending balances, cash receipts, and cash payments. Included with the statement sometimes are physical or scanned copies of the maker's **canceled checks**, the checks written by the maker that have been cashed (paid) by the bank. Exhibit 7-6 is the April 30, 2019, bank statement of Smart Touch Learning.

Bank Statement
A document from the bank that reports the activity in the customer's account. It shows the bank account's beginning and ending balances and lists the month's cash transactions conducted through the bank account.

Canceled Checks
Physical or scanned copies of the maker's cashed (paid) checks.

Exhibit 7-6 | **Bank Statement**

BANK STATEMENT

VALPARAISO STATE BANK
JOHN SIMS PARKWAY; POMPTON PLAINS, IL

Smart Touch Learning
227 Lake Street
Pompton Plains, IL 07444

CHECKING ACCOUNT 136–213733
APRIL 30, 2019

BEGINNING BALANCE	TOTAL DEPOSITS	TOTAL WITHDRAWALS	SERVICE CHARGES	ENDING BALANCE
$12,470	27,080	26,810	20	$12,720

TRANSACTIONS

DEPOSITS	DATE	AMOUNT
Deposit	04/01	19,450
Deposit	04/10	5,500
Deposit	04/22	2,000
EFT—Collection from customer	04/27	100
Interest	04/30	30

CHARGES	DATE	AMOUNT
Service Charge	04/30	20

CHECKS

Number	Amount	Number	Amount	Number	Amount
202	3,200	203	300		
201	20,000	205	150		
200	1,920				

OTHER DEDUCTIONS	DATE	AMOUNT
EFT—Water Works	04/20	40
NSF	04/25	1,200

Electronic Funds Transfers

Electronic funds transfer (EFT) moves cash by electronic communication. Many bills and other payments, such as salaries, rent, utilities, and insurance, are now paid by EFT. It is much cheaper to pay these items by EFT without having to mail a check. Debit card transactions and direct deposits are also considered EFTs.

Electronic Funds Transfer (EFT)
A system that transfers cash by electronic communication rather than by paper documents.

Bank Reconciliation

Bank Reconciliation
A document explaining the reasons for the difference between a depositor's cash records and the depositor's cash balance in its bank account.

The **bank reconciliation** compares and explains the differences between cash on the company's books and cash according to the bank's records on a specific date. There are two records of a business's cash:

1. The Cash account in the company's general ledger. April's Cash T-account for Smart Touch Learning is shown below.

Cash			
Beg. Bal.	10,550	20,000	Apr. 2
Apr. 1	19,450	3,200	Apr. 15
Apr. 8	5,500	300	Apr. 21
Apr. 22	2,000	2,000	Apr. 30
Apr. 30	9,000	150	Apr. 30
End. Bal.	20,850		

2. The bank statement, which shows the cash receipts and payments transacted through the bank. In Exhibit 7-6, however, the bank shows an ending balance of $12,720 for Smart Touch Learning.

Timing Difference
Difference that arises between the balance on the bank statement and the balance on the company's books because of a time lag in recording transactions.

The books and the bank statement usually show different cash balances. Differences may arise because of a time lag in recording transactions, called **timing differences**. Three examples of timing differences follow:

- When a business writes a check, it immediately deducts the amount in its checkbook and Cash account. The bank, however, does not subtract the check from the company's account until the bank pays the check a few days later.
- When a company deposits cash in its account, it immediately adds the cash receipt to the checkbook and Cash account. The bank, however, may take a day or two to add deposits to the company's balance.
- EFT cash payments and EFT cash receipts are often recorded by the bank before a company learns of them.

To obtain accurate cash records, a company must update its Cash account after the company receives its bank statement. A bank reconciliation is used to carry out the updating process. The bank reconciliation explains all differences between the company's cash records and the bank's records of the company's balance. The person who prepares the bank reconciliation should have no other cash duties. This means the reconciler should not be a person who has access to cash or duties that require journalizing cash transactions. Otherwise, he or she could steal cash and manipulate the reconciliation to conceal the theft.

Preparing the Bank Side of the Bank Reconciliation

Here are the items that appear on the bank side of the bank reconciliation. They all cause differences between the bank balance and the book balance.

The bank side contains items not yet recorded by the bank but recorded by the company, or errors made by the bank. These items include the following:

Deposit in Transit
A deposit recorded by the company but not yet by its bank.

Deposits in Transit (Outstanding Deposits) A **deposit in transit** has been recorded and has already been added to the company's book balance, but the bank has not yet recorded it. These are shown as "Add: Deposits in transit" on the bank side because when the bank does record these deposits, it will increase the bank balance.

Outstanding Check
A check issued by a company and recorded on its books but not yet paid by its bank.

Outstanding Checks An **outstanding check** is a check that has been recorded and has already been deducted from the company's book balance, but the bank has not yet paid

(deducted) it. Such checks are shown as "Less: Outstanding checks" on the bank side because when the bank does make payment for the checks, it will decrease the bank balance.

Bank Errors Bank errors are posting errors made by the bank that either incorrectly increase or decrease the bank balance. All bank errors are corrected on the bank side of the reconciliation by reversing the effect of the errors.

Errors are always recorded on the side of the reconciliation of the party that made the error. If the bank made the error, it is recorded on the bank side. If the business made the error, it is recorded on the book side.

Preparing the Book Side of the Bank Reconciliation

The book side contains items not yet recorded by the company on its books but that have been recorded by the bank, or errors made by the company. Items to show on the book side include the following:

Bank Collections Bank collections are cash receipts the bank has received and recorded for a company's account but that the company has not recorded yet on its books. An example of a bank collection would occur when a business has its customers use a lock-box system. Another example is a bank collecting on a note receivable for a business. A bank collection is often referred to as a credit memorandum. A **credit memorandum** indicates that the customer's account has been increased. A bank collection (which increases the bank balance) that appears on the bank statement will show as "Add: Bank collections" on the book side of the reconciliation because it represents cash receipts not yet recorded by the company.

Credit Memorandum
An increase in a bank account.

Electronic Funds Transfers The bank may receive or pay cash on a company's behalf. An EFT may be a cash receipt or a cash payment. These will either show up on the book side of the reconciliation as "Add: EFT" for receipts not yet added to the company's books or "Less: EFT" for payments not yet deducted on the company's books.

Service Charge This cash payment is the bank's fee for processing a company's transactions. Service charges can also include the cost of printed checks and other bank fees such as ATM fees. Service charges could also include the fees charged by the bank for processing credit and debit card transactions if the company used the gross method for recording credit card sales. A service charge is often referred to as a **debit memorandum** and represents a decrease in the bank account. This will show as "Less: Service charges" on the book side of the reconciliation because it represents a cash payment not yet subtracted from the company's cash balance.

Debit Memorandum
A decrease in a bank account.

Interest Revenue on a Checking Account A business will sometimes earn interest if it keeps enough cash in its account. The bank statement tells the company of this cash receipt. This will show as "Add: Interest revenue" on the book side of the reconciliation because it represents cash receipts not yet added in the company's cash balance.

Nonsufficient Funds (NSF) Checks **Nonsufficient funds (NSF) checks** represent checks received from customers for payment of services rendered or merchandise sold that have turned out to be worthless. NSF checks (sometimes called *hot checks* or *bad checks*) are treated as subtractions on a company's bank reconciliation. NSF checks are customer checks the company has received and deposited for which the customer doesn't have enough money in his or her bank account to cover. NSF checks will show as "Less: NSF checks" on the book side of the reconciliation, as the company previously recorded this receipt as an increase in cash, which now has to be deducted as the funds were not actually received.

Nonsufficient Funds (NSF) Check
A check for which the maker's bank account has insufficient money to pay the check.

Book Errors Book errors are errors made on the books of the company that either incorrectly increase or decrease the cash balance in the company's general ledger. All book errors are corrected on the book side of the reconciliation by reversing the effect of the errors.

Completing the Bank Reconciliation

The bank statement in Exhibit 7-6 shows that the April 30 bank balance of Smart Touch Learning is $12,720 (upper-right corner). However, the company's Cash account has a balance of $20,850. This situation calls for a bank reconciliation to explain the difference. In completing the bank reconciliation, Smart Touch Learning will review the bank statement and the business's Cash account to determine the timing differences. Exhibit 7-7, Panel A, lists the reconciling items for your easy reference, and Panel B shows the completed reconciliation.

Exhibit 7-7 | **Bank Reconciliation**

PANEL A—Reconciling Items

Bank side:

1. Deposit in transit, Apr. 30, $9,000.
2. Outstanding check no. 204, $2,000.

Book side:

3. EFT receipt from customer, $100.
4. Interest revenue earned on bank balance, $30.
5. Bank service charge, $20.
6. EFT payment of water bill, $40.
7. NSF check, $1,200.

PANEL B—Bank Reconciliation

SMART TOUCH LEARNING
Bank Reconciliation
April 30, 2019

BANK		BOOK		
Balance, April 30, 2019	$ 12,720	Balance, April 30, 2019		$ 20,850
ADD:		ADD:		
1. Deposit in transit	9,000	3. EFT receipt from customer	$ 100	
	21,720	4. Interest revenue earned on bank balance	30	130
				20,980
LESS:		LESS:		
		5. Service charge	20	
2. Outstanding checks		6. EFT payment of water bill	40	
No. 204	2,000	7. NSF check	1,200	1,260
Adjusted bank balance, April 30, 2019	**$ 19,720**	Adjusted book balance, April 30, 2019		**$ 19,720**

These amounts must agree.

SUMMARY OF THE VARIOUS RECONCILING ITEMS:

BANK BALANCE—ALWAYS

- *Add* deposits in transit.
- *Subtract* outstanding checks.
- *Add* or *subtract* corrections of bank errors.

BOOK BALANCE—ALWAYS

- *Add* bank collections, interest revenue, and EFT receipts.
- *Subtract* service charges, NSF checks, and EFT payments.
- *Add* or *subtract* corrections of book errors.

Examining a Bank Reconciliation

Let's go through each side of the bank reconciliation for Smart Touch Learning.

Bank Side of the Reconciliation

Smart Touch Learning begins by recording the bank balance as of April 30, 2019, which is taken from the bank statement, $12,720. The business then identifies any additions or subtractions affecting the bank balance:

1. **Deposit in transit.** Smart Touch Learning reviews the bank statement and the Cash account to determine whether any cash deposits made by the business have not yet been recorded by the bank. Smart Touch Learning identifies that the deposit made on April 30 for $9,000 has not yet been recorded by the bank. This amount is added to the bank balance.
2. **Outstanding check.** The business reviews the canceled checks included with the statement to determine whether any checks written by the business have not yet cleared the bank. Smart Touch Learning identifies check number 204 for $2,000 as outstanding. This amount is subtracted from the bank balance.

After all items affecting the bank side have been identified, the adjusted bank balance is determined.

Book Side of the Reconciliation

The book side of the reconciliation begins by Smart Touch Learning listing the Cash account balance as of April 30, 2019. This amount—$20,850—is found in the general ledger. Next, Smart Touch Learning reviews the Cash account and bank statement for items that affect the company's Cash account balance but are not recorded by the company:

3. **Electronic funds transfer (EFT).** In reviewing the bank statement, Smart Touch Learning identifies an EFT receipt from a customer in the amount of $100. The company has not recorded this receipt in the Cash account; therefore, it will need to be added to the book balance.
4. **Interest revenue.** Smart Touch Learning identifies a $30 deposit on the bank statement for interest earned that has not yet been recorded in the Cash account. This deposit will be added to the book balance.
5. **Service charge.** The bank statement shows a $20 service charge. Smart Touch Learning has not recorded this charge in the company's Cash account and will, therefore, need to subtract this amount from the book balance.
6. **Electronic funds transfer (EFT).** Listed in the other deductions section on the bank statement, Smart Touch Learning identifies an EFT payment to Water Works for $40. This payment has not been recorded in the company's Cash account. Smart Touch Learning will subtract this amount from the book balance.
7. **Nonsufficient funds (NSF) check.** Smart Touch Learning identifies an NSF check from a customer on the bank statement. The company had recorded the receipt of this check as an increase to cash originally. The bank has now communicated that the customer's check did not clear and that the customer's payment was never deposited into the business's account. Smart Touch Learning must subtract this amount from the book balance.

After recording all of the items that affect the book balance, Smart Touch Learning determines the adjusted book balance and verifies that it equals the adjusted bank balance. This amount represents the correct cash balance as of April 30, 2019.

Journalizing Transactions from the Bank Reconciliation

The bank reconciliation is an accountant's tool separate from the journals and ledgers. It does *not* account for transactions in the journal. To get the transactions into the accounts, we must make journal entries and post to the ledger. All items on the book side of the bank reconciliation require journal entries. We make no journal entries from the items on the bank side because we have already recorded these items in the business's Cash account.

The bank reconciliation in Exhibit 7-7 requires Smart Touch Learning to make journal entries to bring the Cash account up to date. Numbers in the journal entries correspond to the reconciling items listed in Exhibit 7-7, Panel A, and to the book side of the reconciliation in Panel B. Note that we chose to list each item in a separate journal entry here, but one compound entry could be made instead of the five separate entries illustrated.

A↑↓	=	L	+	E
Cash↑ Accounts Receivable↓				

A↑	=	L	+	E↑
Cash↑				Interest Revenue↑

A↓	=	L	+	E↓
Cash↓				Bank Expense↑

A↓	=	L	+	E↓
Cash↓				Utilities Expense↑

A↑↓	=	L	+	E
Accounts Receivable↑ Cash↓				

Date	Accounts and Explanation	Debit	Credit
3: Apr. 30	Cash	100	
	Accounts Receivable		100
	To record account receivable collected by bank.		
4: 30	Cash	30	
	Interest Revenue		30
	To record interest earned on bank balance.		
5: 30	Bank Expense	20	
	Cash		20
	To record bank service charges incurred.		
6: 30	Utilities Expense	40	
	Cash		40
	To record payment of water bill by EFT.		
7: 30	Accounts Receivable	1,200	
	Cash		1,200
	To record NSF check returned by bank.		

The above journal entries are posted to the Cash T-account to update the balance as shown below:

Cash

Beg. Bal.	10,550	20,000	Apr. 2
Apr. 1	19,450	3,200	Apr. 15
Apr. 8	5,500	300	Apr. 21
Apr. 22	2,000	2,000	Apr. 30
Apr. 30	9,000	150	Apr. 30
Bal.	20,850		
Apr. 30	100	20	Apr. 30
Apr. 30	30	40	Apr. 30
		1,200	Apr. 30
End. Bal.	19,720		

Notice that the ending balance in the Cash T-account equals the adjusted book balance and the adjusted bank balance on the bank reconciliation at April 30, 2019.

Try It!

For each of the following items, determine whether the item would be:

- **a.** added to the bank balance
- **b.** subtracted from the bank balance
- **c.** added to the book balance
- **d.** subtracted from the book balance

11. Interest revenue earned

12. NSF check

13. Deposit in transit

14. Service charge

15. Outstanding check

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S7-7 through S7-10. MyAccountingLab

HOW CAN THE CASH RATIO BE USED TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 7
Use the cash ratio to evaluate business performance

Cash is an important part of every business. Without an adequate supply of available cash, businesses cannot continue to operate. Businesses, therefore, monitor cash very carefully. One measure that can be used to measure a company's liquidity is the cash ratio. The **cash ratio** helps to determine a company's ability to meet its short-term obligations. It is calculated as follows:

Cash ratio = (Cash + Cash equivalents) / Total current liabilities

Cash Ratio
A measure of a company's ability to pay current liabilities from cash and cash equivalents: (Cash + Cash equivalents) / Total current liabilities.

Cash Equivalent
A highly liquid investment that can be converted into cash in three months or less.

Notice that the cash ratio includes cash and cash equivalents. **Cash equivalents** are highly liquid investments that can be converted into cash in three months or less. Examples of cash equivalents are money-market accounts and investments in U.S. government securities.

Returning to **Kohl's Corporation**, let's evaluate the company's liquidity using the cash ratio. Kohl's cash and cash equivalents and total current liabilities can be found on the balance sheet (visit http://www.pearsonhighered.com/Horngren to view a link to Kohl's Corporation's annual report) and are presented below (shown in millions):

	January 30, 2016	January 31, 2015
Cash and cash equivalents	$ 707	$ 1,407
Total current liabilities	2,714	2,859

Kohl's cash ratio as of January 30, 2016, follows:

Cash ratio = \$707 / \$2,714 = 0.26

In comparison, the cash ratio as of January 31, 2015, was:

Cash ratio = \$1,407 / \$2,859 = 0.49

The cash ratio has dropped significantly from 2015 to 2016 due to a decrease in available cash and cash equivalents. This ratio is the most conservative valuation of liquidity because it looks at only cash and cash equivalents, leaving out other current assets such as merchandise inventory and accounts receivable. Notice that for both years the cash ratio was below 1.0. Having a cash ratio below 1.0 is a good thing. A cash ratio above 1.0 might signify that the company has an unnecessarily large amount of cash supply. This cash could be used to generate higher profits or be paid out for dividends. However, a very low ratio doesn't send a strong message to investors and creditors that the company has the ability to repay its short-term debt.

Try It!

16. The Scott Sun & Shade Company had the following financial data at December 31, 2018:

Cash and cash equivalents	$ 60,000
Total current liabilities	75,000

What is the cash ratio as of December 31, 2018, for Scott Sun & Shade?

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S7-11. MyAccountingLab

REVIEW

> Things You Should Know

1. What is internal control, and how can it be used to protect a company's assets?

- Internal control is the organizational plan and all the related measures designed to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.
- The Sarbanes-Oxley Act was passed by Congress to revamp corporate governance in the United States.
- Internal control includes five components: control procedures, risk assessment, information system, monitoring of controls, and environment.

2. What are the internal control procedures with respect to cash receipts?

- A point-of-sale terminal provides control over cash receipts over the counter.
- Companies control cash by mail by ensuring appropriate separation of duties when handling cash and recording the transaction.

3. What are the internal control procedures with respect to cash payments?

- Good separation of duties between operations of the business and writing checks for cash payments should exist.
- Many companies use technology to make secure payments.

4. How can a petty cash fund be used for internal control purposes?

- A petty cash fund allows a business to keep cash on hand to pay for small miscellaneous items such as postage, office supplies, and taxi fares.
- When the petty cash fund is established, the company records a debit to Petty Cash and a credit to Cash.
- The petty cash fund is replenished by debiting the associated asset and expense accounts and crediting Cash.
- Discrepancies in petty cash funds are either debited or credited to the Cash Short & Over account.

5. How are credit card sales recorded?

- Sales by credit cards and debit cards are treated as cash sales and typically include a fee (Credit Card Expense) that is paid by the business to the credit card processor.
- Sales can be either recorded using the net or gross method. The net method records the amount of the sale less the processing fee at the time of sale. The gross method records the gross amount of the sale at the time of sale and the credit card fees are recorded at a later time.

6. How can the bank account be used as a control device?

- Bank accounts provide established practices that safeguard a business's money. These controls include use of signature cards, deposit tickets, checks, bank statements, and electronic funds transfers.
- A bank reconciliation can also be used as a form of internal control. The bank reconciliation compares and explains the difference between cash on the company's books and cash according to the bank's records on a specific date.
- After the bank reconciliation has been prepared, journal entries must be completed for all items on the book side of the bank reconciliation.

7. How can the cash ratio be used to evaluate business performance?

- The cash ratio measures a company's ability to pay its current liabilities from cash and cash equivalents.
- Cash ratio = (Cash + Cash equivalents) / Total current liabilities.

> Check Your Understanding 7-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Misler Corporation established a $300 petty cash fund on January 12, 2018. Karen Misler (KM) is the fund custodian. At the end of the month, the petty cash fund contains the following:

a. Cash: $163

b. Petty cash tickets, as follows:

No.	Amount	Issued to	Signed by	Account Debited
44	$ 14	B. Jarvis	B. Jarvis and KM	Office Supplies
45	39	S. Bell	S. Bell	Delivery Expense
47	43	R. Tate	R. Tate and KM	—
48	33	L. Blair	L. Blair and KM	Travel Expense

CHAPTER 7

Requirements

1. Identify three internal control weaknesses revealed in the given data. (See Learning Objectives 1, 4)
2. Journalize the following transactions (See Learning Objective 4):
   a. Establishment of the petty cash fund on January 12, 2018.
   b. Replenishment of the fund on January 31, 2018. Assume petty cash ticket no. 47 was issued for the purchase of office supplies.
3. What is the balance in the Petty Cash account immediately before replenishment? Immediately after replenishment? (See Learning Objective 4)

> Solution

Requirement 1

The three internal control weaknesses are as follows:

1. Petty cash ticket no. 46 is missing. There is no indication of what happened to this ticket. The company should investigate.
2. The petty cash custodian (KM) did not sign petty cash ticket no. 45. This omission may have been an oversight on her part. However, it raises the question of whether she authorized the payment. Both the fund custodian and the recipient of the cash should sign the petty cash ticket.
3. Petty cash ticket no. 47 does not indicate which account to debit on the actual ticket. If Tate or Karen Misler do not remember where the $43 went, then the accountant will not know what account should be debited.

Requirement 2

Petty cash journal entries:

a. Entry to establish the petty cash fund:

Date	Accounts and Explanation	Debit	Credit
Jan. 12	Petty Cash	300	
	Cash		300
	To open the petty cash fund.		

b. Entry to replenish the fund:

Date	Accounts and Explanation	Debit	Credit
Jan. 31	Office Supplies	57	
	Delivery Expense	39	
	Travel Expense	33	
	Cash Short & Over	8	
	Cash		137
	To replenish the petty cash fund.		

Requirement 3

The balance in the Petty Cash account is *always* its imprest balance, in this case $300.

> Check Your Understanding 7-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The Cash account of Baylor Associates at February 28, 2019, follows:

Cash			
Beg. Bal.	3,995	400	Feb. 3
Feb. 6	800	3,100	Feb. 12
Feb. 15	1,800	1,100	Feb. 19
Feb. 23	1,100	500	Feb. 25
Feb. 28	2,400	900	Feb. 27
End. Bal.	4,095		

Baylor Associates received the following bank statement on February 28, 2019:

BANK STATEMENT

BANK OF TOMORROW
123 PETER PAN RD, KISSIMMEE, FL 34747

Baylor Associates
14 W Gadsden St
Pensacola, FL 32501

CHECKING ACCOUNT 136–213734

FEBRUARY 28, 2019

BEGINNING BALANCE	TOTAL DEPOSITS	TOTAL WITHDRAWALS	SERVICE CHARGES	ENDING BALANCE
$3,995	4,715	5,630	10	$3,070

TRANSACTIONS

DEPOSITS	DATE	AMOUNT
Deposit	02/07	800
Deposit	02/15	1,800
EFT—Collection of note	02/17	1,000
Deposit	02/24	1,100
Interest	02/28	15

CHARGES	DATE	AMOUNT
Service Charge	02/28	10

CHECKS

Number	Amount	Number	Amount	Number	Amount
102	400	103	1,100		
101	3,100				

OTHER DEDUCTIONS	DATE	AMOUNT
EFT—EZ Rent	02/01	330
NSF Check	02/13	700

CHAPTER 7

Additional data:

Baylor deposits all cash receipts in the bank and makes all payments by check.

Requirements

1. Prepare the bank reconciliation of Baylor Associates at February 28, 2019. (See Learning Objective 6)
2. Journalize the entries based on the bank reconciliation. (See Learning Objective 6)

> Solution

Requirement 1

BAYLOR ASSOCIATES Bank Reconciliation February 28, 2019		
Bank:		
Balance, February 28, 2019		$ 3,070
Add: Deposit of February 28 in transit		2,400
		5,470
Less: Outstanding checks issued on February 25		
($500) and February 27 ($900)		1,400
Adjusted bank balance, February 28, 2019		**$ 4,070**
Books:		
Balance, February 28, 2019		$ 4,095
Add: Bank collection of note receivable	$ 1,000	
Interest revenue earned on bank balance	15	1,015
		5,110
Less: Service charge	10	
NSF check	700	
EFT—Rent expense	330	1,040
Adjusted book balance, February 28, 2019		**$ 4,070**

Must be equal.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Feb. 28	Cash	1,000	
	Notes Receivable		1,000
	Note receivable collected by bank.		
28	Cash	15	
	Interest Revenue		15
	Interest earned on bank balance.		
28	Bank Expense	10	
	Cash		10
	Bank service charge.		
28	Accounts Receivable	700	
	Cash		700
	NSF check returned by bank.		
28	Rent Expense	330	
	Cash		330
	Monthly rent expense.		

> Key Terms

Account Number (p. 396)
Bank Reconciliation (p. 398)
Bank Statement (p. 397)
Canceled Checks (p. 397)
Cash Equivalent (p. 403)
Cash Ratio (p. 403)
Check (p. 396)
Collusion (p. 385)
Committee of Sponsoring Organizations (COSO) (p. 381)
Credit Memorandum (p. 399)
Debit Memorandum (p. 399)
Deposit in Transit (p. 398)
Deposit Ticket (p. 396)
Electronic Data Interchange (EDI) (p. 389)
Electronic Funds Transfer (EFT) (p. 397)
Encryption (p. 384)
Evaluated Receipts Settlement (ERS) (p. 389)
External Auditor (p. 383)
Firewall (p. 384)
Imprest System (p. 391)
Internal Auditor (p. 383)
Internal Control (p. 381)
Internal Control Report (p. 382)
Lock-Box System (p. 387)
Maker (p. 396)
Nonsufficient Funds (NSF) Check (p. 399)
Outstanding Check (p. 398)
Payee (p. 396)
Petty Cash (p. 390)
Public Company (p. 381)
Remittance Advice (p. 387)
Routing Number (p. 396)
Sarbanes-Oxley Act (SOX) (p. 382)
Separation of Duties (p. 383)
Signature Card (p. 396)
Timing Difference (p. 398)

> Quick Check

Learning Objective 1

1. Which of the following is *not* part of the definition of internal control?

a. Separation of duties
b. Safeguard assets
c. Encourage employees to follow company policies
d. Promote operational efficiency

Learning Objective 1

2. The Sarbanes-Oxley Act

a. created the Private Company Accounting Board.
b. allows accountants to audit and to perform any type of consulting work for a public company.
c. stipulates that violators of the act may serve 20 years in prison for securities fraud.
d. requires that an outside auditor must evaluate a public company's internal controls.

Learning Objective 1

3. Encryption

a. avoids the need for separation of duties.
b. creates firewalls to protect data.
c. cannot be broken by hackers.
d. rearranges messages by a special process.

Learning Objective 1

4. Separation of duties is important for internal control of

a. cash receipts.
b. cash payments.
c. Neither of the above
d. Both a and b

Learning Objective 2

5. Michelle Darby receives cash from customers. Her other assigned job is to post the collections to customer accounts receivable. Her company has weak

a. assignment of responsibilities.
b. ethics.
c. computer controls.
d. separation of duties.

Learning Objective 3

6. Payment by check is an important internal control over cash payments because

a. the check must be signed by an authorized official.
b. before signing the check, the official reviews the invoice supporting the payment.
c. Both a and b
d. None of the above

Learning Objective 4

7. The petty cash fund had an initial imprest balance of $100. It currently has $20 and petty cash tickets totaling $75 for office supplies. The entry to replenish the fund would contain

a. a credit to Cash Short & Over for $5.
b. a credit to Petty Cash for $80.
c. a debit to Cash Short & Over for $5.
d. a debit to Petty Cash for $80.

Learning Objective 5

8. When recording credit card or debit card sales using the net method,

a. cash received equals sales.
b. cash received equals sales minus the fee assessed by the card processing company.
c. cash received equals sales plus the fee assessed by the card processing company.
d. cash isn't received by the seller until the customer pays his or her credit card statement.

Learning Objective 6

9. The document that explains all the differences between the company's cash records and the bank's figures is called a(n)

a. bank collection. **c.** bank statement.
b. electronic fund transfer. **d.** bank reconciliation.

Learning Objective 6

10. Sahara Company's Cash account shows an ending balance of $650. The bank statement shows a $29 service charge and an NSF check for $150. A $240 deposit is in transit and outstanding checks total $420. What is Sahara's adjusted cash balance?

a. $291 **b.** $829 **c.** $471 **d.** $470

Learning Objective 7

11. Espinoza Air Conditioning & Heating had the following select financial data as of June 30, 2018.

Cash	$ 10,000
Cash Equivalents	8,850
Accounts Receivable	3,700
Total current liabilities	29,000

What is Espinoza's cash ratio?

a. 0.34 **b.** 0.65 **c.** 0.78 **d.** 1.54

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is internal control?
2. How does the Sarbanes-Oxley Act relate to internal controls?
3. What are the five components of internal control? Briefly explain each component.
4. What is the difference between an internal auditor and external auditor?
5. What is separation of duties?
6. List internal control procedures related to e-commerce.
7. What are some limitations of internal controls?
8. How do businesses control cash receipts over the counter?
9. How do businesses control cash receipts by mail?
10. What are the steps taken to ensure control over purchases and payments by check?
11. What are the controls needed to secure the petty cash fund?
12. When are the only times the Petty Cash account is used in a journal entry?
13. What are two common methods used when accepting deposits for credit card and debit card transactions?
14. What are some common controls used with a bank account?

15. What is a bank reconciliation?
16. List some examples of timing differences, and for each difference, determine if it would affect the book side of the reconciliation or the bank side of the reconciliation.
17. Why is it necessary to record journal entries after the bank reconciliation has been prepared? Which side of the bank reconciliation requires journal entries?
18. What does the cash ratio help determine, and how is it calculated?

> Short Exercises

Learning Objective 1

S7-1 Defining internal control

Internal controls are designed to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate accounting records.

Requirements

1. Which objective do you think is most important?
2. Which objective do you think the internal controls must accomplish for the business to survive? Give your reason.

Learning Objective 2

S7-2 Applying internal control over cash receipts

Sandra Kristof sells furniture for McKinney Furniture Company. Kristof is having financial problems and takes $650 that she received from a customer. She rang up the sale through the cash register. What will alert Megan McKinney, the controller, that something is wrong?

Learning Objective 2

S7-3 Applying internal control over cash receipts by mail

Review the internal controls over cash receipts by mail presented in the chapter. Exactly what is accomplished by the final step in the process, performed by the controller?

Learning Objective 3

S7-4 Applying internal control over cash payments by check

A purchasing agent for Franklin Office Supplies receives the goods that he purchases and also approves payment for the goods.

Requirements

1. How could this purchasing agent cheat his company?
2. How could Franklin avoid this internal control weakness?

Learning Objective 4

S7-5 Journalizing petty cash

Prepare the journal entries for the following petty cash transactions of Everly Gaming Supplies:

Mar. 1	Established a petty cash fund with a $250 balance.
31	The petty cash fund has $24 in cash and $235 in petty cash tickets that were issued to pay for Office Supplies ($35) and Entertainment Expense ($200). Replenished the fund and recorded the expenditures.
Apr. 15	Increased the balance of the petty cash fund to $300.

S7-6 Recording credit card and debit card sales

Learning Objective 5

Restaurants do a large volume of business by credit and debit cards. Suppose Summer, Sand, and Castles Resort restaurant had these transactions on January 28, 2018:

National Express credit card sales	$ 10,800
ValueCard debit card sales	10,000

Requirements

1. Suppose Summer, Sand, and Castles Resort's processor charges a 2% fee and deposits sales net of the fee. Journalize these sales transactions for the restaurant.
2. Suppose Summer, Sand, and Castles Resort's processor charges a 2% fee and deposits sales using the gross method. Journalize these sales transactions for the restaurant.

S7-7 Understanding bank account controls

Learning Objective 6

Answer the following questions about the controls in bank accounts:

Requirements

1. Which bank control protects against forgery?
2. Which bank control reports the activity in the customer's account each period?
3. Which bank control confirms the amount of money put into the bank account?

S7-8 Identifying timing differences related to a bank reconciliation

Learning Objective 6

For each timing difference listed, identify whether the difference would be reported on the book side of the reconciliation or the bank side of the reconciliation. In addition, identify whether the difference would be an addition or subtraction.

- **a.** Deposit in transit
- **b.** Bank collection
- **c.** Debit memorandum from bank
- **d.** EFT cash receipt
- **e.** Outstanding checks
- **f.** $1,000 deposit erroneously recorded by the bank as $100
- **g.** Service charges
- **h.** Interest revenue
- **i.** $2,500 cash payment for rent expense erroneously recorded by the business as $250
- **j.** Credit memorandum from bank

S7-9 Preparing a bank reconciliation

Learning Objective 6

The Cash account of Guard Dog Security Systems reported a balance of $2,540 at December 31, 2018. There were outstanding checks totaling $400 and a December 31 deposit in transit of $100. The bank statement, which came from Park Cities Bank, listed the December 31 balance of $3,340. Included in the bank balance was a collection of $510 on account from Brendan Ballou, a Guard Dog customer who pays the bank directly. The bank statement also shows a $30 service charge and $20 of interest revenue that Guard Dog earned on its bank balance. Prepare Guard Dog's bank reconciliation at December 31.

Note: Short Exercise S7-9 must be completed before attempting Short Exercise S7-10.

Learning Objective 6

S7-10 Recording transactions from a bank reconciliation

Review your results from preparing Guard Dog Security Systems's bank reconciliation in Short Exercise S7-9. Journalize the company's transactions that arise from the bank reconciliation. Include an explanation with each entry.

Learning Objective 7

S7-11 Computing the cash ratio

Smythe Banners reported the following figures in its financial statements:

Cash	$ 26,500
Cash Equivalents	5,000
Total Current Liabilities	30,000

Compute the cash ratio for Smythe Banners.

> Exercises

Learning Objective 1

E7-12 Understanding the Sarbanes-Oxley Act and identifying internal control strengths and weaknesses

The following situations suggest a strength or a weakness in internal control.

a. Top managers delegate all internal control procedures to the accounting department.

b. Accounting department staff (or the bookkeeper) orders merchandise and approves invoices for payment.

c. Cash received over the counter is controlled by the sales clerk, who rings up the sale and places the cash in the register. The sales clerk matches the total recorded by the register to each day's cash sales.

d. The employee who signs checks need not examine the payment packet because he is confident the amounts are correct.

Requirements

1. Define *internal control*.
2. The system of internal control must be tested by external auditors. What law or rule requires this testing?
3. Identify each item in the list above as either a strength or a weakness in internal control, and give your reason for each answer.

Learning Objective 1

E7-13 Identifying internal controls

Consider each situation separately. Identify the missing internal control procedure from these characteristics:

- Assignment of responsibilities
- Separation of duties
- Audits
- Electronic devices
- Other controls (specify)

a. While reviewing the records of Quality Pharmacy, you find that the same employee orders merchandise and approves invoices for payment.

b. Business is slow at Amazing Amusement Park on Tuesday, Wednesday, and Thursday nights. To reduce expenses, the business decides not to use a ticket taker on those nights. The ticket seller (cashier) is told to keep the tickets as a record of the number sold.

c. The same trusted employee has served as cashier for 12 years.

d. When business is brisk, Fast Mart deposits cash in the bank several times during the day. The manager at one store wants to reduce the time employees spend delivering cash to the bank, so he starts a new policy. Cash will build up over weekends, and the total will be deposited on Monday.

e. Grocery stores such as Convenience Market and Natural Foods purchase most merchandise from a few suppliers. At another grocery store, the manager decides to reduce paperwork. He eliminates the requirement that the receiving department prepare a receiving report listing the goods actually received from the supplier.

E7-14 Evaluating internal control over cash receipts

Learning Objective 2

Dogtopia sells pet supplies and food and handles all sales with a cash register. The cash register displays the amount of the sale. It also shows the cash received and any change returned to the customer. The register also produces a customer receipt but keeps no internal record of the transactions. At the end of the day, the clerk counts the cash in the register and gives it to the cashier for deposit in the company bank account.

Requirements

1. Identify the internal control weakness over cash receipts.
2. What could you do to correct the weakness?

E7-15 Evaluating internal control over cash payments

Learning Objective 3

Gary's Great Cars purchases high-performance auto parts from a Nebraska vendor. Dave Simon, the accountant for Gary's, verifies receipt of merchandise and then prepares, signs, and mails the check to the vendor.

Requirements

1. Identify the internal control weakness over cash payments.
2. What could the business do to correct the weakness?

Learning Objectives 1, 2, 3

E7-16 Understanding internal control, components, procedures, and laws

Match the following terms with their definitions.

1. Internal control	**a.** Two or more people working together to overcome internal controls.
2. Control procedures	**b.** Part of internal control that ensures resources are not wasted.
3. Firewalls	**c.** Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports.
4. Encryption	**d.** Should be prenumbered to prevent theft and inefficiency.
5. Environment	**e.** Limits access to a local network.
6. Information system	**f.** Example: The person who opens the bank statement should not also be the person who is reconciling cash.
7. Separation of duties	**g.** Identification of uncertainties that may arise due to a company's products, services, or operations.
8. Collusion	**h.** Examination of a company's financial statements and accounting system by a trained accounting professional.
9. Documents	**i.** Without a sufficient one of these, information cannot properly be gathered and summarized.
10. Audits	**j.** The organizational plan and all the related measures that safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting data.
11. Operational efficiency	**k.** Component of internal control that helps ensure business goals are achieved.
12. Risk assessment	**l.** Rearranges data by a mathematical process.
13. Sarbanes-Oxley Act	**m.** To establish an effective one, a company's CEO and top managers must behave honorably to set a good example for employees.

Learning Objective 4

2. Cash Short & Over $15

E7-17 Accounting for petty cash

Jackie's Dance Studio created a $220 imprest petty cash fund. During the month, the fund custodian authorized and signed petty cash tickets as follows:

Petty Cash Ticket No.	Item	Account Debited	Amount
1	Delivery of programs to customers	Delivery Expense	$ 20
2	Mail package	Postage Expense	10
3	Newsletter	Printing Expense	25
4	Key to closet	Miscellaneous Expense	40
5	Copier paper	Office Supplies	70

Requirements

1. Make the general journal entry to create the petty cash fund. Include an explanation.
2. Make the general journal entry to record the petty cash fund replenishment. Cash in the fund totals $40. Include an explanation.
3. Assume that Jackie's Dance Studio decides to decrease the petty cash fund to $120. Make the general journal entry to record this decrease.

CHAPTER 7

Learning Objective 4

2. March 31, Cash CR $136

E7-18 Controlling petty cash

Just Hangin' Night Club maintains an imprest petty cash fund of $150, which is under the control of Sandra Morgan. At March 31, the fund holds $14 cash and petty cash tickets for office supplies, $128, and delivery expense, $15.

Requirements

1. Explain how an imprest petty cash system works.
2. Journalize the establishment of the petty cash fund on March 1 and the replenishing of the fund on March 31.
3. Prepare a T-account for Petty Cash and post to the account. What is the balance of the Petty Cash account at all times?

Learning Objective 5

E7-19 Journalizing credit card sales

Marathon Running Shoes reports the following:

2018	
Sep. 1	Recorded National Express credit card sales for of $96,000, net of processor fee of 1%. Ignore Cost of Goods Sold.
15	Recorded ValueMax credit card sales of $80,000. Processor charges a 1.5% fee. ValueMax charges the fee at the end of the month, therefore Marathon uses the gross method for these credit card sales. Ignore Cost of Goods Sold.
30	ValueMax collected the fees for the month of September. Assume the September 15 transaction is the only ValueMax credit card sale.

Journalize all entries required for Marathon Running Shoes.

Learning Objective 6

E7-20 Classifying bank reconciliation items

The following items could appear on a bank reconciliation:

- **a.** Outstanding checks, $670.
- **b.** Deposits in transit, $1,500.
- **c.** NSF check from customer, no. 548, for $175.
- **d.** Bank collection of note receivable of $800, and interest of $80.
- **e.** Interest earned on bank balance, $20.
- **f.** Service charge, $10.
- **g.** The business credited Cash for $200. The correct amount was $2,000.
- **h.** The bank incorrectly decreased the business's account by $350 for a check written by another business.

Classify each item as (1) an addition to the book balance, (2) a subtraction from the book balance, (3) an addition to the bank balance, or (4) a subtraction from the bank balance.

Learning Objective 6

1. Adjusted Balance $1,137

E7-21 Preparing a bank reconciliation

Hardy Photography's checkbook lists the following:

Date	Check No.	Item	Check	Deposit	Balance
Nov. 1					$ 500
4	622	Quick Mailing	$ 45		455
9		Service Revenue		$ 135	590
13	623	Photo Supplies	85		505
14	624	Utilities	45		460
18	625	Cash	50		410
26	626	Office Supplies	110		300
28	627	Upstate Realty Co.	290		10
30		Service Revenue		1,235	1,245

Hardy's November bank statement shows the following:

Balance			$ 500
Deposits			135
Checks:	No.	Amount	
	622	$ 45	
	623	85	
	624	105*	
	625	50	(285)
Other charges:			
Printed checks		23	
Service charge		25	(48)
Balance			$ 302

*This is the correct amount for check number 624.

Requirements

1. Prepare Hardy Photography's bank reconciliation at November 30, 2018.
2. How much cash does Hardy actually have on November 30, 2018?
3. Journalize any transactions required from the bank reconciliation.

Learning Objective 6

1. Book Deductions $314

E7-22 Preparing a bank reconciliation

Jim Root Corporation operates four bowling alleys. The business just received the October 31, 2018, bank statement from City National Bank, and the statement shows an ending balance of $910. Listed on the statement are an EFT rent collection of $440, a service charge of $7, NSF checks totaling $50, and a $23 charge for printed checks. In reviewing the cash records, the business identified outstanding checks totaling $440 and a deposit in transit of $1,800. During October, the business recorded a $260 check by debiting Salaries Expense and crediting Cash for $26. The business's Cash account shows an October 31 balance of $2,144.

Requirements

1. Prepare the bank reconciliation at October 31.
2. Journalize any transactions required from the bank reconciliation.

> Problems Group A

P7-23A Identifying internal control weakness in cash receipts

Learning Objective 2

Seawind Productions makes all sales on credit. Cash receipts arrive by mail. Justin Broadway, the mailroom clerk, opens envelopes and separates the checks from the accompanying remittance advices. Broadway forwards the checks to another employee, who makes the daily bank deposit but has no access to the accounting records. Broadway sends the remittance advices, which show cash received, to the accounting department for entry in the accounts. Broadway's only other duty is to grant sales allowances to customers. (A *sales allowance* decreases the customer's account receivable.) When Broadway receives a customer check for $600 less a $30 allowance, he records the sales allowance and forwards the document to the accounting department.

Requirements

1. Identify the internal control weakness in this situation.
2. Who should record sales allowances?
3. What is the amount that should be shown in the ledger for cash receipts?

P7-24A Correcting internal control weaknesses

Learning Objectives 1, 2, 3

Each of the following situations has an internal control weakness.

a. Upside-Down Applications develops custom programs to customer's specifications. Recently, development of a new program stopped while the programmers redesigned Upside-Down's accounting system. Upside-Down's accountants could have performed this task.

b. Norma Rottler has been your trusted employee for 24 years. She performs all cash-handling and accounting duties. Norma just purchased a new luxury car and a new home in an expensive suburb. As owner of the company, you wonder how she can afford these luxuries because you pay her only $30,000 a year and she has no source of outside income.

c. Izzie Hardwoods, a private company, falsified sales and inventory figures in order to get an important loan. The loan went through, but Izzie later went bankrupt and could not repay the bank.

d. The office supply company where Pet Grooming Goods purchases sales receipts recently notified Pet Grooming Goods that its documents were not prenumbered. Howard Mustro, the owner, replied that he never uses receipt numbers.

e. Discount stores such as Cusco make most of their sales in cash, with the remainder in credit card sales. To reduce expenses, one store manager ceases purchasing fidelity bonds on the cashiers.

f. Cornelius's Corndogs keeps all cash receipts in an empty box for a week because the owner likes to go to the bank on Tuesdays when Joann is working.

Requirements

1. Identify the missing internal control characteristics in each situation.
2. Identify the possible problem caused by each control weakness.
3. Propose a solution to each internal control problem.

Learning Objective 4

3. June 30, Cash CR $210

P7-25A Accounting for petty cash transactions

On June 1, Fab Salad Dressings creates a petty cash fund with an imprest balance of $300. During June, Al Franklin, the fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
101	Office supplies	$ 30
102	Cab fare for executive	20
103	Delivery of package across town	50
104	Business dinner	40
105	Merchandise inventory	90

On June 30, prior to replenishment, the fund contains these tickets plus cash of $90. The accounts affected by petty cash payments are Office Supplies, Travel Expense, Delivery Expense, Entertainment Expense, and Merchandise Inventory.

Requirements

1. Explain the characteristics and the internal control features of an imprest fund.
2. On June 30, how much cash should the petty cash fund hold before it is replenished?
3. Journalize all required entries to create the fund and replenish it. Include explanations.
4. Make the July 1 entry to increase the fund balance to $375. Include an explanation and briefly describe what the custodian does.

Learning Objective 4

2. June 30, Cash CR $160

P7-26A Accounting for petty cash transactions

Suppose that on June 1, Rockin' Gyrations, a disc jockey service, creates a petty cash fund with an imprest balance of $300. During June, Michael Martell, fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
1	Postage for package received	$ 30
2	Office party	25
3	Two boxes of stationery	20
4	Printer cartridges	15
5	Business dinner	65

On June 30, prior to replenishment, the fund contains these tickets plus cash of $140. The accounts affected by petty cash payments are Office Supplies, Entertainment Expense, and Postage Expense.

Requirements

1. On June 30, how much cash should this petty cash fund hold before it is replenished?
2. Journalize all required entries to (a) create the fund and (b) replenish it. Include explanations.
3. Make the entry on July 1 to increase the fund balance to $325. Include an explanation.

Learning Objective 6

1. Adjusted Balance $18,025

P7-27A Preparing a bank reconciliation and journal entries

The December cash records of Davidson Insurance follow:

Cash Receipts		Cash Payments	
Date	**Cash Debit**	**Check No.**	**Cash Credit**
Dec. 4	$ 4,240	1416	$ 810
9	550	1417	180
14	600	1418	630
17	1,900	1419	1,390
31	1,860	1420	1,490
		1421	700
		1422	600

Davidson's Cash account shows a balance of $17,450 at December 31. On December 31, Davidson Insurance received the following bank statement:

Bank Statement for December				
Beginning Balance				$ 14,100
Deposits and other Credits:				
Dec.	1	EFT	$ 350	
Dec.	5		4,240	
Dec.	10		550	
Dec.	15		600	
Dec.	18		1,900	
Dec.	22	BC	1,400	9,040
Checks and other Debits:				
Dec.	8	NSF	400	
Dec.	11 (check no. 1416)		810	
Dec.	19	EFT	225	
Dec.	22 (check no. 1417)		180	
Dec.	29 (check no. 1418)		630	
Dec.	31 (check no. 1419)		1,930	
Dec.	31	SC	10	(4,185)
Ending Balance				$ 18,955

Explanations: BC–bank collection; EFT–electronic funds transfer;
NSF–nonsufficient funds checks; SC–service charge

Additional data for the bank reconciliation follow:

a. The EFT credit was a receipt of rent. The EFT debit was an insurance payment.

b. The NSF check was received from a customer.

c. The $1,400 bank collection was for a note receivable.

d. The correct amount of check no. 1419, for rent expense, is $1,930. Davidson's controller mistakenly recorded the check for $1,390.

Requirements

1. Prepare the bank reconciliation of Davidson Insurance at December 31, 2018.
2. Journalize any required entries from the bank reconciliation.

Learning Objective 6

1. Book Additions $2,120

P7-28A Preparing a bank reconciliation and journal entries

The August 31 bank statement of Well Healthcare has just arrived from United Bank. To prepare the bank reconciliation, you gather the following data:

a. The August 31 bank balance is $4,540.

b. The bank statement includes two charges for NSF checks from customers. One is for $380 (#1), and the other is for $180 (#2).

c. The following Well Healthcare checks are outstanding at August 31:

Check No.	Amount
237	$ 80
288	190
291	570
294	600
295	30
296	70

d. Well collects from a few customers by EFT. The August bank statement lists a $1,200 EFT deposit for a collection on account.

e. The bank statement includes two special deposits that Well hasn't recorded yet: $800 for dividend revenue, and $120 for the interest revenue Well earned on its bank balance during August.

f. The bank statement lists a $50 subtraction for the bank service charge.

g. On August 31, the Well treasurer deposited $260, but this deposit does not appear on the bank statement.

h. The bank statement includes a $1,050 deduction for a check drawn by Multi-State Freight Company. Well notified the bank of this bank error.

i. Well's Cash account shows a balance of $2,800 on August 31.

Requirements

1. Prepare the bank reconciliation for Well Healthcare at August 31, 2018.
2. Journalize any required entries from the bank reconciliation. Include an explanation for each entry.

> Problems Group B

Learning Objective 2

P7-29B Identifying internal control weakness in cash receipts

Pendley Productions makes all sales on credit. Cash receipts arrive by mail. Larry Chipello, the mailroom clerk, opens envelopes and separates the checks from the accompanying remittance advices. Chipello forwards the checks to another employee, who makes the daily bank deposit but has no access to the accounting records. Chipello sends the remittance advices, which show cash received, to the accounting department for entry in the accounts. Chipello's only other duty is to grant sales

allowances to customers. (A *sales allowance* decreases the customer's account receivable.) When Chipello receives a customer check for $575 less a $45 allowance, he records the sales allowance and forwards the document to the accounting department.

Requirements

1. Identify the internal control weakness in this situation.
2. Who should record sales allowances?
3. What is the amount that should be shown in the ledger for cash receipts?

P7-30B Correcting internal control weaknesses

Learning Objectives 1, 2, 3

Each of the following situations has an internal control weakness.

a. Jade Applications has decided that one way to cut costs in the upcoming year is to fire the external auditor. The business believes that the internal auditor should be able to efficiently monitor the company's internal controls.
b. In an effort to minimize the amount of paperwork, Ross Homes has decided that it will not keep copies of customer invoices related to sales revenue. Ross believes that this effort will minimize the amount of data storage the company will have to pay for.
c. Elle Bee, a trusted employee for many years, has never taken a vacation. The owner believes that he's lucky that she is so committed to her job.
d. The Medicine Chest Company keeps a small petty cash fund to handle small cash transactions. Because no one wants to volunteer to be the custodian, the business manager has decided that all employees should have access to the petty cash. She figures that as long as each employee fills out a petty cash ticket, then there are proper controls in place.
e. Due to the cost of maintaining the security cameras, Wings and More has decided that it will remove the cameras that monitor the cash register.
f. Bryan Miller, manager of Hardware Emporium, prides himself on hiring exceptionally skilled employees who need no training to do their jobs.

Requirements

1. Identify the missing internal control characteristics in each situation.
2. Identify the possible problem caused by each control weakness.
3. Propose a solution to each internal control problem.

P7-31B Accounting for petty cash transactions

Learning Objective 4

3. Cash Short & Over CR $15

On September 1, Party Salad Dressings creates a petty cash fund with an imprest balance of $600. During September, Michael Martell, the fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
101	Office supplies	$ 60
102	Cab fare for executive	25
103	Delivery of package across town	45
104	Business dinner	55
105	Merchandise inventory	75

CHAPTER 7

On September 30, prior to replenishment, the fund contains these tickets plus cash of \$355. The accounts affected by petty cash payments are Office Supplies, Travel Expense, Delivery Expense, Entertainment Expense, and Merchandise Inventory.

Requirements

1. Explain the characteristics and the internal control features of an imprest fund.
2. On September 30, how much cash should the petty cash fund hold before it is replenished?
3. Journalize all required entries to create the fund and replenish it. Include explanations.
4. Make the October 1 entry to increase the fund balance to \$800. Include an explanation and briefly describe what the custodian does.

Learning Objective 4

2. Sep. 30, Cash CR \$140

P7-32B Accounting for petty cash transactions

Suppose that on September 1, Cool Gyrations, a disc jockey service, creates a petty cash fund with an imprest balance of \$350. During September, Ruth Mangan, fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
1	Postage for package received	\$ 25
2	Office party	10
3	Two boxes of stationery	20
4	Printer cartridges	15
5	Business dinner	65

On September 30, prior to replenishment, the fund contains these tickets plus cash of \$210. The accounts affected by petty cash payments are Office Supplies, Entertainment Expense, and Postage Expense.

Requirements

1. On September 30, how much cash should this petty cash fund hold before it is replenished?
2. Journalize all required entries to (a) create the fund and (b) replenish it. Include explanations.
3. Make the entry on October 1 to increase the fund balance to \$425. Include an explanation.

Learning Objective 6

1. Adjusted Balance \$17,580

P7-33B Preparing a bank reconciliation and journal entries

The May cash records of Donald Insurance follow:

Cash Receipts		Cash Payments	
Date	Cash Debit	Check No.	Cash Credit
May 4	\$ 4,230	1416	\$ 890
9	520	1417	120
14	530	1418	630
17	1,950	1419	1,090
31	1,840	1420	1,420
		1421	900
		1422	670

CHAPTER 7

Donald's Cash account shows a balance of $17,750 at May 31. On May 31, Donald Insurance received the following bank statement:

Bank Statement for May				
Beginning Balance				$ 14,400
Deposits and other Credits:				
May	1	EFT	$ 450	
May	5		4,230	
May	10		520	
May	15		530	
May	18		1,950	
May	22	BC	1,700	9,380
Checks and other Debits:				
May	8	NSF	1,100	
May	11 (check no. 1416)		890	
May	19	EFT	375	
May	22 (check no. 1417)		120	
May	29 (check no. 1418)		630	
May	31 (check no. 1419)		1,900	
May	31	SC	35	(5,050)
Ending Balance				$ 18,730

Explanations: BC–bank collection; EFT–electronic funds transfer; NSF–nonsufficient funds checks; SC–service charge

Additional data for the bank reconciliation follow:

a. The EFT credit was a receipt of rent. The EFT debit was an insurance payment.

b. The NSF check was received from a customer.

c. The $1,700 bank collection was for a note receivable.

d. The correct amount of check 1419, for rent expense, is $1,900. Donald's controller mistakenly recorded the check for $1,090.

Requirements

1. Prepare the bank reconciliation of Donald Insurance at May 31, 2018.

2. Journalize any required entries from the bank reconciliation.

P7-34B Preparing a bank reconciliation and journal entries

Learning Objective 6

1. Book Deductions $630

The October 31 bank statement of Wyndham's Healthcare has just arrived from State Bank. To prepare the bank reconciliation, you gather the following data:

a. The October 31 bank balance is $6,290.

b. The bank statement includes two charges for NSF checks from customers. One is for $370 (#1), and the other is for $180 (#2).

CHAPTER 7

c. The following Wyndham's checks are outstanding at October 31:

Check No.	Amount
237	$ 120
288	140
291	570
294	570
295	30
296	110

d. Wyndham's collects from a few customers by EFT. The October bank statement lists a $2,200 EFT deposit for a collection on account.

e. The bank statement includes two special deposits that Wyndham's hasn't recorded yet: $900 for dividend revenue and $100 for the interest revenue Wyndham's earned on its bank balance during October.

f. The bank statement lists a $80 subtraction for the bank service charge.

g. On October 31, the Wyndham's treasurer deposited $270, but this deposit does not appear on the bank statement.

h. The bank statement includes a $750 deduction for a check drawn by Multi-State Freight Company. Wyndham's notified the bank of this bank error.

i. Wyndham's Cash account shows a balance of $3,200 on October 31.

Requirements

1. Prepare the bank reconciliation for Wyndham's Healthcare at October 31, 2018.
2. Journalize any required entries from the bank reconciliation. Include an explanation for each entry.

CRITICAL THINKING

> Using Excel

P7-35 Using Excel for a Bank Reconciliation

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Lori Anders of Wilderness Associates is getting ready to prepare the October bank reconciliation.

The cash balance on the books of Wilderness Associates on October 31 is $3,546.

Lori reviews the bank statement, and notes the checking account balance at October 31 is $2,445. The bank statement also reveals that the bank collected a note receivable on behalf of Wilderness Associates—the principal was $1,500 and the interest was $15. One customer's check for $29 was returned by the bank for insufficient funds. Two additional items on the bank statement were the monthly EFT for the utilities, $250, and the bank service fee of $12. Lori notes that the cash deposit made on October 31 of $3,300 does not appear on the statement, and that three checks totaling $975 had not cleared the bank account when the bank statement was prepared.

Requirements

1. Prepare the bank reconciliation for Wilderness Associates at October 31, 2018. Format appropriate cells with dollar signs and double underlines. Use Excel formulas to calculate subtotals and totals.
2. Journalize the entries based on the bank reconciliation. For dollar amounts, use cell references on bank reconciliation.

> Continuing Problem

P7-36 Preparing a bank reconciliation and journal entries

This problem continues the Canyon Canoe Company situation from Chapter 6. Canyon Canoe Company has decided to open a new checking account at River Nations Bank during March 2019. Canyon Canoe Company's March Cash T-account for the new cash account from its general ledger is as follows:

Cash—River Nations Bank Checking Account

Mar. 1	Balance	0			
2	Deposit	10,000	200	Mar. 2	Ck#101
13	Deposit	2,325	4,300	4	Ck#102
20	Deposit	2,750	750	9	Ck#103
27	Deposit	4,500	1,675	14	Ck#104
31	Deposit	3,490	1,500	21	Ck#105
			175	28	Ck#106
			300	30	Ck#107
Balance		14,165			

Canyon Canoe Company's bank statement dated March 31, 2019, follows:

Beginning Balance, March 1, 2019			$ 0
Deposits and other credits:			
Mar. 2		$10,000	
14		2,325	
21		2,750	
28		4,500	
29	EFT Sport Shirts(1)	500	
31	Interest Revenue	45	20,120
Checks and other debits:			
Mar. 2	EFT to Bank Checks(2)	55	
3	Ck#101	200	
6	Ck#102	4,300	
15	Ck#104	1,675	
16	Ck#103	750	
28	EFT to Rivers Energy(3)	270	
29	Ck#106	175	
31	Bank service charge	70	(7,495)
Ending balance, March 31, 2019			$ 12,625

(1) Sport Shirts is a customer making a payment on account.

(2) Bank Checks is a company that prints business checks (considered a bank expense) for Canyon Canoe Company

(3) Rivers Energy is a utility provider.

Requirements

1. Prepare the bank reconciliation at March 31, 2019.
2. Journalize any transactions required from the bank reconciliation.
3. Compute the adjusted account balance for the Cash T-account, and denote the balance as *End. Bal.* Does the adjusted balance of the Cash T-account match the adjusted book balance on the bank reconciliation?

> Practice Set

P7-37 Preparing a bank reconciliation and journal entries

This problem continues the Crystal Clear Cleaning problem begun in Chapter 2 and continued through Chapter 6.

In March 2019, Crystal Clear Cleaning opened a new checking account at First Regional Bank. The bank statement dated March 31, 2019, for Crystal Clear Cleaning follows:

Beginning Balance, March 1, 2019			$ 0
Deposits and other credits:			
Mar. 2		$33,000	
10		900	
18		19,000	
20		50,000	
23	EFT Peg's Restaurant(1)	350	
31	Interest Revenue	50	103,300
Checks and other debits:			
Mar. 2	EFT to Check Art(2)	10	
5	Ck#235	2,400	
9	Ck#237	1,500	
9	Ck#236	2,900	
26	Ck#239	2,000	
28	EFT to Texas Energy(3)	130	
29	Ck#240	300	
31	Bank service charge	25	(9,265)
Ending balance, March 31, 2019			$ 94,035

(1) Peg's Restaurant is a customer making a payment on account.

(2) Check Art is a company that prints business checks (considered a bank expense) for Crystal Clear Cleaning.

(3) Texas Energy is a utility provider.

Crystal Clear Cleaning's Cash account in the general ledger shows the following transactions for March:

Cash—First Regional Bank Checking Account

Balance		0			
Mar. 2	Deposit	33,000	2,400	Mar. 2	Ck#235
10	Deposit	900	2,900	4	Ck#236
18	Deposit	19,000	1,500	5	Ck#237
20	Deposit	50,000	400	10	Ck#238
31	Deposit	1,770	2,000	21	Ck#239
			300	23	Ck#240
			300	29	Ck#241
Balance		94,870			

Requirements

1. Prepare the bank reconciliation at March 31, 2019.
2. Journalize any required entries from the bank reconciliation. Post to the Cash T-account to verify the balance of the account matches the adjusted book balance from the bank reconciliation.

> Tying It All Together Case 7-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Buffalo Wild Wings, Inc.'s 2015 annual report (https://www.sec.gov/Archives/edgar/data/1062449/000106244916000052/bwld2015122710-k.htm).

Buffalo Wild Wings, Inc. owns and operates more than 550 Buffalo Wild Wings, R Taco, and PizzaRev restaurants. Additionally, the corporation has franchised restaurants in both the United States and Canada. The corporation takes internal control responsibilities very seriously and in 2015 conducted an assessment of the effectiveness of its internal controls over financial reporting.

Requirements

1. Review Item 9a (Controls and Procedures) of the Notes to the Financial Statements. What was the material weakness in internal controls that Buffalo Wild Wings discovered when the company conducted its assessment?
2. Review the auditor's report over internal controls (p. 66 of the annual report). What did the auditor have to say about the company's internal controls?
3. What remedial measures does the company plan to take in order to correct the weaknesses in internal control?

> Decision Cases

Decision Case 7-1

Conduct an Internet search for information on internal control and the Sarbanes-Oxley Act. Write a report of your findings. In your report, discuss some of the advantages and disadvantages of the Sarbanes-Oxley Act. Present it to your class (if required by your instructor).

Decision Case 7-2

This case is based on an actual situation. Centennial Construction Company, headquartered in Dallas, Texas, built a Rodeway Motel 35 miles north of Dallas. The construction foreman, whose name was Slim Chance, hired the 40 workers needed to complete the project. Slim had the construction workers fill out the necessary tax forms, and he sent their documents to the home office.

Work on the motel began on April 1 and ended September 1. Each week, Slim filled out a time card of hours worked by each employee during the week. Slim faxed the time cards to the home office, which prepared the payroll checks on Friday morning. Slim drove to the home office on Friday, picked up the payroll checks, and returned to the construction site. At 5 p.m. on Friday, Slim distributed payroll checks to the workers.

Requirements

1. Describe in detail the main internal control weakness in this situation. Specify what negative result(s) could occur because of the internal control weakness.
2. Describe what you would do to correct the internal control weakness.

> Fraud Case 7-1

Levon Helm was a kind of one-man mortgage broker. He would drive around Tennessee looking for homes that had second mortgages, and if the criteria were favorable, he would offer to buy the second mortgage for "cash on the barrelhead." Helm bought low and sold high, making sizable profits. Being a small operation, he employed one person, Cindy Patterson, who did all his bookkeeping. Patterson was an old family friend, and he trusted her so implicitly that he never checked up on the ledgers or the bank reconciliations. At some point, Patterson started "borrowing" from the business and concealing her transactions by booking phony expenses. She intended to pay it back someday, but she got used to the extra cash and couldn't stop. By the time the scam was discovered, she had drained the company of funds that it owed to many of its creditors. The company went bankrupt, Patterson did some jail time, and Helm lost everything.

Requirements

1. What was the key control weakness in this case?
2. Many small businesses cannot afford to hire enough people for adequate separation of duties. What can they do to compensate for this?

> Financial Statement Case 7-1

Visit http://www.pearsonhighered.com/Horngren to view a link to **Target Corporation's** 2015 Fiscal Year Annual Report. Study the audit opinion (labeled Report of Independent Registered Public Accounting Firm) of Target Corporation and the Target Corporation financial statements. Answer the following questions about the company:

Requirements

1. What is the name of Target's outside auditing firm (independent registered public accounting firm)? What office of this firm signed the audit report?
2. Who bears primary responsibility for maintaining effective internal control over financial reporting? How can you tell?
3. Does it appear that Target's internal controls are adequate? How can you tell?
4. What standard of auditing did the outside auditors use in examining the Target financial statements?
5. By how much did Target's cash balance (including cash equivalents) change during year ended January 30, 2016? What were the beginning and ending cash balances?
6. Review the notes to the consolidated financial statements, specifically Note 11 dealing with Cash Equivalents. What type of instruments does Target consider to be cash equivalents?
7. Determine Target's cash ratio as of January 30, 2016, and January 31, 2015. How do Target's cash ratios compare with **Kohl's Corporation** as illustrated in the chapter? Explain.

> Communication Activity 7-1

In 100 words or fewer, explain why there may be a difference between the bank statement ending cash balance and the ending balance in the Cash account. Give at least two examples each of adjustments to the bank balance and to the book balance.

> Quick Check Answers

1. a **2.** d **3.** d **4.** d **5.** d **6.** c **7.** c **8.** b **9.** d **10.** c **11.** b

Chapter 7
Internal Control and Cash

Review Questions

1. Internal control is the organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

2. The Sarbanes-Oxley Act requires public companies to issue an internal control report, which is a report by management describing its responsibility for and the adequacy of internal controls over financial reporting. Additionally, an outside auditor must evaluate the client's internal controls and report on the internal controls as part of the audit report.

3. The five components of internal control are: control procedures, risk assessment, information system, monitoring of controls, and environment.
- Control procedures are designed to ensure that the business's goals are achieved.
- The company's business risk, as well as the risk over individual accounts, must be assessed. The higher the risk, the more controls must be in place to safeguard the company's assets.
- Information system controls must be in place to ensure appropriate authorizations and approvals are used and that accurate information is produced.
- Monitoring of controls is performed by both internal and external auditors to determine whether the company and employees are following company policies and that operations are running efficiently.
- The environment is the "tone at the top" of the business. Members of management must behave honorably to set a good example for company employees.

4. Internal auditors are employees of the business who ensure that the company's employees are following company policies, that the company is meeting legal requirements, and that operations are running efficiently. External auditors are outside accountants, completely independent of the business, who monitor the controls to ensure the financial statements are presented fairly in accordance with GAAP.

5. Separation of duties limits fraud and promotes the accuracy of the accounting records by dividing responsibility between two or more people. The two main areas of separation are separating operations from accounting and separating the custody of assets from accounting.

6. Internal control procedures related to e-commerce are encryption and firewalls.

7. Limitations to internal controls relate to cost and benefit. The better the controls, the more they can cost, so a company needs to determine the best balance of cost and benefit. It can also be difficult for a business to prevent collusion—when two or more people work together to circumvent internal controls and defraud the company.

8. Businesses control cash receipts over the counter by using a cash register. The cash register only opens after the clerk enters a transaction and it is recorded. A receipt is given to the customer. The cash register report of cash sales at the end of the day is compared to the cash in the drawer. All cash is deposited in the bank at the end of the day. These measures, coupled with oversight by a manager, discourage theft.

9. Businesses control cash receipts by mail by separating the check and the remittance advice in the mail room. The checks are given to the treasurer to deposit in the bank, and the remittance advice is used by the accounting department to record the payment to the customer's account. The controller will compare the debit to cash and the bank deposit receipt to ensure they agree. Some companies may also use a lock-box system, where cash receipts are sent directly to a post office box managed by a bank's employee.

10. Steps taken to ensure control over purchases and payments by check are**:** The buyer sends a purchase order to the supplier that contains the quantity and type of goods needed. The supplier ships the item and sends the buyer an invoice; once the item is received a receiving report is prepared. Once all the documents are matched and approved, a check is sent to the supplier.

11. The controls needed to secure the petty cash fund are the following: Designate a custodian of the fund, designate a specific amount of cash to be kept in the fund, and support all petty cash fund payments with a petty cash ticket.

12. The only times the Petty Cash account is debited are when the fund is started or when its amount is increased. If the Petty Cash account is decreased, the account is credited.

13. Two common methods for deposits of proceeds from credit card sales are the net method and the gross method. With the net method, the total sale less the processing fee assessed equals the net amount of cash deposited by the processor, usually within a few days of the sale date. With the gross method, the total sale is deposited daily, within a few days of the actual sale date. The processing fees for all transactions processed for the month are deducted from the company's bank account by the processor, often on the last day of the month.

14. Common controls used with a bank account are the use of a signature card, deposit tickets, checks, bank statements, and bank reconciliations.

15. A bank reconciliation compares and explains the difference between cash on the company's books and cash according to the bank's records on a specific date.

16. Examples of timing differences are:
a. Deposits in transit**—**affect the bank side
b. Outstanding Checks**—**affect the bank side
c. Electronic funds transfer**—**affect the book side

17. Once the bank reconciliation is complete, all items that affect the book side of the reconciliation need to be recorded with journal entries. This ensures the cash balance agrees with the reconciled amount. This also updates the Cash account for unrecorded transactions.

18. The cash ratio helps to determine a company's ability to meet its short-term obligations. It is calculated as follows: Cash ratio = (Cash + Cash equivalents) / Total current liabilities

Short Exercises

S7-1
Requirement 1

Safeguarding assets is the most important objective.

Requirement 2

A company must protect its assets; otherwise it is throwing away resources. If they fail to safeguard cash, the most liquid of assets, it will quickly slip away.

S7-2

When the controller compares the sales report with cash sales from the cash register to the deposit slip, she will notice a difference.

S7-3

The final step by the controller, comparing the bank deposit and the debit to Cash to ensure they agree, indicates that all cash receipts are safe in the bank and the company's books are up-to-date.

S7-4
Requirement 1

The purchasing agent could buy goods and have them sent to his or her home. Or a purchasing agent could overpay for a purchase, approve the payment, and split the excess payment with the supplier.

Requirement 2

The purchasing agent (the employee who prepares the purchase order) should neither receive the goods nor approve the payment.

S7-5

Date	Accounts and Explanation	Debit	Credit
Mar. 1	Petty Cash	250	
	Cash		250
31	Office Supplies	35	
	Entertainment Expense	200	
	Cash Short & Over		9
	Cash ($250 – $24)		226
Apr. 15	Petty Cash	50	
	Cash		50

S7-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 28	Cash	20,384	
	Credit Card Expense ($20,800 × 0.02)	416	
	Sales Revenue		20,800
	Recorded credit card sales, net of fee.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 28	Cash	20,800	
	Sales Revenue ($10,800 + $10,000)		20,800
	Recorded credit card sales.		

S7-7
Requirement 1

The bank's requirement that each authorized person sign a signature card will help protect against forgery.

Requirement 2

The bank statement reports the activity in the customer's account for a designated period of time, such as a month.

Requirement 3

Banks supply standard forms such as a deposit ticket. Completed by the customer, the deposit ticket shows the amount of each deposit. As proof of the transaction, the customer keeps a deposit receipt.

S7-8

a.	Bank	Addition
b.	Book	Addition
c.	Book	Subtraction
d.	Book	Addition
e.	Bank	Subtraction
f.	Bank	Addition
g.	Book	Subtraction
h.	Book	Addition
i.	Book	Subtraction
j.	Book	Addition

S7-9

GUARD DOG SECURITY SYSTEMS
Bank Reconciliation
December 31, 2018

BANK		BOOK		
Balance, December 31, 2018	$ 3,340	Balance, December 31, 2018		$ 2,540
ADD:		ADD:		
Deposit in transit	100	Bank collection from customer	$ 510	
	3,440	Interest revenue	20	530
				3,070
LESS:		LESS:		
Outstanding checks	400	Service charge		30
Adjusted bank balance, December 31, 2018	$ 3,040	Adjusted book balance, December 31, 2018		$ 3,040

S7-10

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	510	
	Accounts Receivable—Brendan Ballou		510
	To record account receivable collected by bank.		
31	Cash	20	
	Interest Revenue		20
	To record interest earned on bank balance.		
31	Bank Expense	30	
	Cash		30
	To record bank service charges incurred.		

S7-11

Cash ratio = (Cash + Cash equivalents) / Total current liabilities = ($26,500 + $5,000) / $30,000 = 1.05

Exercises

E7-12
Requirement 1

Internal control is the organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

Requirement 2

A provision of the Sarbanes-Oxley Act requires that an outside auditor evaluate the client's internal controls and report on the internal controls as part of the audit report.

Requirement 3

a.	Weakness	The control environment would be more effective if top management led in establishing internal controls.
b.	Weakness	The ordering of merchandise should be separate from the approving of invoices for payment. Accounting department staff or the bookkeeper could have goods sent to their homes and approve the payment.
c.	Weakness	The sales clerk should not have access to the register total, as the clerk could change the record.
d.	Weakness	The employee signing the check needs to examine the payment packet to ensure the amounts are correct and payments are made only for the items ordered and received. Otherwise inappropriate payments could be made.

E7-13

a. Separation of duties
b. Separation of duties
c. Other controls (no job rotation)
d. Other controls (not depositing cash soon enough for adequate security; competent, reliable and ethical personnel)
e. Other controls (documents and records – no receiving report)

E7-14
Requirement 1

There is a weakness in internal control over cash receipts.

- The cash register does not keep an internal record of sales.
- The clerk counts the cash in the cash drawer at the end of the day.

Requirement 2

To prevent these weaknesses, the following controls should be implemented:

- Have a manager count the cash in the cash drawer at the end of the day and compare it to the register tape.
- The cash register should keep an internal record of the sale.
- The register tape should go to the accounting department to record the cash and sale in the journal.

E7-15
Requirement 1

The same person is responsible for verifying receipt of merchandise, authorizing payment, and preparing the payment.

Requirement 2

To prevent these weaknesses, the following controls should be implemented:

- Purchase orders should be used to authorize inventory purchases.
- The accountant should receive the receiving report and purchase order form from other departments before issuing payment.
- The receipt of goods should be verified by someone other than the accountant or the person authorizing the purchase order.
- The accountant should not place the purchase order.

E7-16

1.	j
2.	k
3.	e
4.	l
5.	m
6.	i
7.	f
8.	a
9.	d
10.	h
11.	b
12.	g
13.	c

E7-17
Requirement 1, 2, 3

Date	Accounts and Explanation	Debit	Credit
	Petty Cash	220	
	Cash		220
	To open the petty cash fund.		
	Delivery Expense	20	
	Postage Expense	10	
	Printing Expense	25	
	Miscellaneous Expense	40	
	Office Supplies	70	
	Cash Short & Over	15	
	Cash ($220 – $40)		180
	To replenish the petty cash fund.		
	Cash	100	
	Petty Cash		100
	To decrease the petty cash fund.		

E7-18
Requirement 1

Maintaining the Petty Cash account at its designated balance is the nature of an imprest system. The imprest system requires that, at any point in time, the petty cash box contains cash and receipts that total the amount of the imprest balance. This clearly identifies the amount of cash for which the custodian is responsible, and it is the system's main internal control feature.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Mar. 1	Petty Cash	150	
	Cash		150
	To open the petty cash fund.		
31	Office Supplies	128	
	Delivery Expense	15	
	Cash Short & Over		7
	Cash ($150 – $14)		136
	To replenish the petty cash fund.		

E7-18, cont.
Requirement 3

	Petty Cash	
Mar. 1	150	

Petty cash balance at all times is $150.

E7-19

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 1	Cash	95,040	
	Credit Card Expense ($96,000 × 0.01)	960	
	Sales Revenue		96,000
	Recorded credit card sales, net of fee.		
15	Cash	80,000	
	Sales Revenue		80,000
	Recorded credit card sales.		
30	Credit Card Expense ($80,000 × 0.015)	1,200	
	Cash		1,200
	Paid fees assessed by credit card processor.		

E7-20

a. (4) a subtraction from the bank balance
b. (3) an addition to the bank balance
c. (2) a subtraction from the book balance
d. (1) an addition to the book balance
e. (1) an addition to the book balance
f. (2) a subtraction from the book balance
g. (2) a subtraction from the book balance
h. (3) an addition to the bank balance

E7-21
Requirement 1

HARDY PHOTOGRAPHY Bank Reconciliation November 30, 2018					
BANK			BOOK		
Balance, November 30, 2018		$ 302	Balance, November 30, 2018		$ 1,245
ADD:			ADD:		
Deposit in transit		1,235			
		1,537			1,245
LESS:			LESS:		
Outstanding checks			Book error check 624	$ 60	
No. 626	$ 110		Printed checks	23	
No. 627	290	400	Service charge	25	108
Adjusted bank balance, November 30, 2018		$ 1,137	Adjusted book balance, November 30, 2018		$ 1,137

Nov. 1 Book Balance	$ 500
Add: Deposits ($135 + $1,235)	1,370
Less: Checks ($45 + $85 + $45 + $50 + $110 + $290)	625
Nov. 30 Book Balance	$1,245

Requirement 2
Hardy has $1,137 in cash on November 30, 2018.

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Nov. 30	Utilities Expense	60	
	Cash		60
	To record check error #624		
30	Bank Expense	23	
	Cash		23
	To record printed check charge incurred.		
30	Bank Expense	25	
	Cash		25
	To record bank service charges incurred.		

E7-22
Requirement 1

JIM ROOT CORPORATION Bank Reconciliation October 31, 2018				
BANK		BOOK		
Balance, October 31, 2018	$ 910	Balance, October 31, 2018		$ 2,144
ADD:		ADD:		
Deposit in transit	1,800	EFT collection on rent		440
	2,710			2,584
		LESS:		
		Correction of book error	$ 234	
		NSF checks	50	
LESS:		Printed checks	23	
Outstanding checks	440	Service charge	7	314
Adjusted bank balance, October 31, 2018	$ 2,270	Adjusted book balance, October 31, 2018		$ 2,270

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Cash	440	
	Rent Revenue		440
	To record EFT rent collection.		
31	Salaries Expense	234	
	Cash		234
	To record error on salary check.		
31	Accounts Receivable	50	
	Cash		50
	To record NSF checks.		
31	Bank Expense	23	
	Cash		23
	To record printed check charge incurred.		
31	Bank Expense	7	
	Cash		7
	To record bank service charges incurred.		

Problems (Group A)

P7-23A
Requirement 1

The job of receiving customers' payments is performed by the same person who is responsible for accounting for sales allowances. There is an inadequate separation of duties.

Requirement 2

The sales allowances should be recorded by a person who does not have access to the cash receipts, such as the bookkeeper.

Requirement 3

The amount that should be shown in the ledger for cash receipts is \$570 (\$600 − \$30).

P7-24A

	Requirement 1 Missing Internal Control Characteristic	Requirement 2 Possible Problem	Requirement 3 Solution
a.	Assignment of responsibilities	Lost sales due to delay of product development	Assign company accountants to redesign the accounting system. Assign programmers to product development only.
b.	Separation of duties	Theft of cash	Keep accounting and cash-handling duties separate.
c.	Audit	Unreliable financial statements and lost credibility	Have an external audit to reduce the risk of false financial statements.
d.	Documents	Theft of cash and inefficiency	Use pre-numbered documents.
e.	Other controls	Theft of cash	Purchase fidelity bonds for all cashiers.
f.	The bank account as a control device or competent, reliable and ethical personnel	Theft of cash	Deposit to a bank account daily to utilize bank controls over cash.

P7-25A
Requirement 1

Maintaining the Petty Cash account at its designated balance is the nature of an imprest system. The imprest system requires that, at any point in time, the petty cash box contains cash and receipts that total the amount of the imprest balance. This clearly identifies the amount of cash for which the custodian is responsible, and it is the system's main internal control feature.

Requirement 2

Before replenishment, the petty cash fund should hold cash of $70. ($300 – total payments of $230).

Requirement 3

Date	Accounts and Explanation	Debit	Credit
June 1	Petty Cash	300	
	Cash		300
	To open the petty cash fund.		
30	Office Supplies	30	
	Travel Expense	20	
	Delivery Expense	50	
	Entertainment Expense	40	
	Merchandise Inventory	90	
	Cash Short & Over		20
	Cash ($300 − $90)		210
	To replenish the petty cash fund.		

Requirement 4

Date	Accounts and Explanation	Debit	Credit
July 1	Petty Cash	75	
	Cash		75
	To increase the petty cash fund.		

The custodian would cash the check and place the currency and coin with the other funds in the petty cash box.

P7-26A
Requirement 1

Before replenishment, the petty cash fund should hold cash of $145. ($300 – total payments of $155).

Requirement 2

Date	Accounts and Explanation	Debit	Credit
June 1	Petty Cash	300	
	Cash		300
	To open the petty cash fund.		
30	Postage Expense	30	
	Entertainment Expense ($25 + $65)	90	
	Office Supplies ($20 + $15)	35	
	Cash Short & Over	5	
	Cash ($300 − $140)		160
	To replenish the petty cash fund.		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
July 1	Petty Cash	25	
	Cash		25
	To increase the petty cash fund.		

P7-27A
Requirement 1

DAVIDSON INSURANCE Bank Reconciliation December 31, 2018					
BANK			BOOK		
Balance, December 31, 2018		$ 18,955	Balance, December 31, 2018		$ 17,450
ADD:			ADD:		
Deposit in transit		1,860	EFT collection of rent	$ 350	
		20,815	Bank collection of note	1,400	1,750
					19,200
LESS:			LESS:		
Outstanding checks			Correction of book error	540	
No. 1420	$ 1,490		NSF check	400	
No. 1421	700		EFT – insurance payment	225	
No. 1422	600	2,790	Service charge	10	1,175
Adjusted bank balance, December 31, 2018		$ 18,025	Adjusted book balance, December 31, 2018		$ 18,025

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	350	
	Rent Revenue		350
	To record EFT rent collection.		
31	Cash	1,400	
	Notes Receivable		1,400
	To record bank collection of notes receivable.		
31	Rent Expense	540	
	Cash		540
	To record error on check 1419.		
31	Accounts Receivable	400	
	Cash		400
	To record NSF check.		
31	Insurance Expense	225	
	Cash		225
	To record EFT insurance payment.		
31	Bank Expense	10	
	Cash		10
	To record bank service charges incurred.		

P7-28A
Requirement 1

WELL HEALTHCARE Bank Reconciliation August 31, 2018					
BANK			BOOK		
Balance, August 31, 2018		$ 4,540	Balance, August 31, 2018		$ 2,800
ADD:			ADD:		
Deposit in transit	$ 260		EFT collection on account	$ 1,200	
Bank error	1,050	1,310	Dividend revenue	800	
		5,850	Interest revenue	120	2,120
LESS:					4,920
Outstanding checks					
No. 237	$ 80				
No. 288	190				
No. 291	570		LESS:		
No. 294	600		NSF check #1	380	
No. 295	30		NSF check #2	180	
No. 296	70	1,540	Service charge	50	610
Adjusted bank balance, August 31, 2018		$ 4,310	Adjusted book balance, August 31, 2018		$ 4,310

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Cash	1,200	
	Accounts Receivable		1,200
	To record EFT collection on account		
31	Cash	800	
	Dividend Revenue		800
	To record dividend revenue		
31	Cash	120	
	Interest Revenue		120
	To record interest revenue		
31	Accounts Receivable ($380 + $180)	560	
	Cash		560
	To record NSF checks		
31	Bank Expense	50	
	Cash		50
	To record bank service charges incurred.		

Problems (Group B)

P7-29B
Requirement 1

The job of receiving customers' payments is performed by the same person who is responsible for accounting for sales allowances. There is an inadequate separation of duties.

Requirement 2

The sales allowances should be recorded by a person who does not have access to the cash receipts, such as the bookkeeper.

Requirement 3
The amount that should be shown in the ledger for cash receipts is $530.

P7-30B

	Requirement 1 Missing Internal Control Characteristic	Requirement 2 Possible Problem	Requirement 3 Solution
a.	Audit	Unreliable financial statements and lost credibility	Have an external audit to reduce the risk of false financial statements.
b.	Documents	Theft of cash and inefficiency, lack of support for financial statement transactions	Keep copies of the customer invoices and look into using electronic copies.
c.	Other controls (mandatory vacations)	Theft of cash	Require all employees to take vacations.
d.	Assignment of responsibilities	Theft of cash and inefficiency	One person should be responsible for the petty cash fund.
e.	Other controls (security cameras)	Theft of cash	If the security cameras are too expensive (cost/benefit), have controls over access to the cash register and separation of duties in regards to counting the cash.
f.	Competent, reliable, and ethical personnel	Theft of cash and inefficiency	Every organization is different, so some training is usually required for all employees.

P7-31B
Requirement 1

Maintaining the Petty Cash account at its designated balance is the nature of an imprest system. The imprest system requires that, at any point in time, the petty cash box contains cash and receipts that total the amount of the imprest balance. This clearly identifies the amount of cash for which the custodian is responsible, and it is the system's main internal control feature.

Requirement 2

Before replenishment, the petty cash fund should hold cash of $340. ($600 – total payments of $260).

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Petty Cash	600	
	Cash		600
	To open the petty cash fund.		
30	Office Supplies	60	
	Travel Expense	25	
	Delivery Expense	45	
	Entertainment Expense	55	
	Merchandise Inventory	75	
	Cash Short & Over		15
	Cash ($600 − $355)		245
	To replenish the petty cash fund.		

Requirement 4

Date	Accounts and Explanation	Debit	Credit
Oct. 1	Petty Cash	200	
	Cash		200
	To increase the petty cash fund.		

The custodian would cash the check and place the currency and coin with the other funds in the petty cash box.

P7-32B
Requirement 1

Before replenishment, the petty cash fund should hold cash of $215. ($350 – total payments of $135).

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Petty Cash	350	
	Cash		350
	To open the petty cash fund.		
30	Postage Expense	25	
	Entertainment Expense ($10 + $65)	75	
	Office Supplies ($20 + $15)	35	
	Cash Short & Over	5	
	Cash ($350 − $210)		140
	To replenish the petty cash fund.		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Oct. 1	Petty Cash	75	
	Cash		75
	To increase the petty cash fund.		

P7-33B
Requirement 1

DONALD INSURANCE Bank Reconciliation May 31, 2018					
BANK			BOOK		
Balance, May 31, 2018		$ 18,730	Balance, May 31, 2018		$ 17,750
ADD:			ADD:		
Deposit in transit		1,840	EFT collection of rent	$ 450	
		20,570	Bank collection of note	1,700	2,150
					19,900
LESS:			LESS:		
Outstanding checks			Correction of book error	810	
No. 1420	$ 1,420		NSF check	1,100	
No. 1421	900		EFT – insurance payment	375	
No. 1422	670	2,990	Service charge	35	2,320
Adjusted bank balance, May 31, 2018		$ 17,580	Adjusted book balance, May 31, 2018		$ 17,580

Requirement 2

Date	Accounts and Explanation	Debit	Credit
May 31	Cash	450	
	Rent Revenue		450
	To record EFT rent collection.		
31	Cash	1,700	
	Notes Receivable		1,700
	To record bank collection of notes receivable.		
31	Rent Expense	810	
	Cash		810
	To record error on check 1419.		
31	Accounts Receivable	1,100	
	Cash		1,100
	To record NSF check.		
31	Insurance Expense	375	
	Cash		375
	To record EFT insurance payment.		
31	Bank Expense	35	
	Cash		35
	To record bank service charges incurred.		

P7-34B
Requirement 1

WYNDHAM'S HEALTHCARE Bank Reconciliation October 31, 2018					
BANK			BOOK		
Balance, October 31, 2018		$ 6,290	Balance, October 31, 2018		$ 3,200
ADD:			ADD:		
Deposit in transit	$ 270		EFT collection on account	$ 2,200	
Bank error	750	1,020	Dividend revenue	900	
		7,310	Interest revenue	100	3,200
LESS:					6,400
Outstanding checks					
No. 237	120				
No. 288	140				
No. 291	570		LESS:		
No. 294	570		NSF check #1	370	
No. 295	30		NSF check #2	180	
No. 296	110	1,540	Service charge	80	630
Adjusted bank balance, October 31, 2018		$ 5,770	Adjusted book balance, October 31, 2018		$ 5,770

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Cash	2,200	
	Accounts Receivable		2,200
	To record EFT collection on account.		
31	Cash	900	
	Dividend Revenue		900
	To record dividend revenue.		
31	Cash	100	
	Interest Revenue		100
	To record interest revenue.		
31	Accounts Receivable ($370 + $180)	550	
	Cash		550
	To record NSF checks.		
31	Bank Expense	80	
	Cash		80
	To record bank service charges incurred.		

Using Excel

P7-35

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P7-36
Requirement 1

CANYON CANOE COMPANY Bank Reconciliation March 31, 2019					
BANK			BOOK		
Balance, March 31, 2019		$ 12,625	Balance, March 31, 2019		$ 14,165
ADD:			ADD:		
Deposit in transit		3,490	EFT collection from Sport Shirts	$ 500	
		16,115	Interest revenue	45	545
					14,710
LESS:			LESS:		
Outstanding checks			EFT payment to Bank Checks	55	
No. 105	$ 1,500		EFT payment to Rivers Energy	270	
No. 107	300	1,800	Service charge	70	395
Adjusted bank balance, March 31, 2019		$ 14,315	Adjusted book balance, March 31, 2019		$ 14,315

P7-36, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Cash	500	
	Accounts Receivable—Sport Shirts		500
	To record EFT collection from customer.		
31	Cash	45	
	Interest Revenue		45
	To record interest revenue.		
31	Bank Expense	55	
	Cash		55
	To record EFT payment to Bank Checks.		
31	Utilities Expense	270	
	Cash		270
	To record EFT payment to Rivers Energy.		
31	Bank Expense	70	
	Cash		70
	To record bank service charge paid.		

Requirement 3

Cash—Rivers Nation Bank Checking Account

Balance	14,165		
Mar. 31	500	55	Mar. 31
31	45	270	31
		70	31
End. Bal.	14,315		

The ending balance of the Cash account, $14,315, matches the adjusted book balance from the bank reconciliation.

P7-37
Requirement 1

CRYSTAL CLEAR CLEANING Bank Reconciliation March 31, 2019					
BANK			BOOK		
Balance, March 31, 2019		$ 94,035	Balance, March 31, 2019		$ 94,870
ADD:			ADD:		
Deposit in transit		1,770	EFT collection from Peg's Rest.	$ 350	
		95,805	Interest revenue	50	400
					95,270
LESS:			LESS:		
Outstanding checks			EFT payment to Check Art	$ 10	
No. 238	$ 400		EFT payment to Texas Energy	130	
No. 241	300	700	Service charge	25	165
Adjusted bank balance, March 31, 2019		$ 95,105	Adjusted book balance, March 31, 2019		$ 95,105

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Cash	350	
	Accounts Receivable—Peg's Restaurant		350
	To record EFT collection from customer.		
31	Cash	50	
	Interest Revenue		50
	To record interest revenue.		
31	Bank Expense	10	
	Cash		10
	To record EFT payment to Check Art.		
31	Utilities Expense	130	
	Cash		130
	To record EFT payment to Texas Energy.		
31	Bank Expense	25	
	Cash		25
	To record bank service charge incurred.		

P7-37, cont.
Requirement 2, cont.

Cash—First Regional Bank Checking Account			
Balance	94,870		
Mar. 31	350	10	Mar. 31
31	50	130	31
		25	31
Balance	95,105		

The balance of the Cash account, $95,105, matches the adjusted book balance from the bank reconciliation.

Tying It All Together Case 7-1

Requirement 1
Buffalo Wild Wings found that it did not maintain sufficient resources to identify and analyze changes in business activities and the related impact on internal control over financial reporting. Specifically, the company notes internal control weaknesses in the areas of (1) accounting for lease arrangements and (2) the review and approval of manual journal entries.

Requirement 2KPMG, LLP, the company's auditors, found material weaknesses related to a lack of sufficient resources to identify and analyze changes in business activities and the impact on internal controls, ineffective accounting for lease arrangements, and over review and approval of manual journal entries. Because of the weaknesses, the auditors determined that Buffalo Wild Wings, Inc. had not maintained effective internal control over financial reporting as of December 27, 2015.

Requirement 3
The company is in the process of improving its policies related to lease transactions. In addition, the company is strengthening its review and approval of manual journal entries, and has added resources necessary to implement necessary revisions to internal controls.

Decision Case 7-1
Student responses will vary based on what kind of information they find on the Internet.

Decision Case 7-2
Requirement 1

The main problem with the situation is that one person, the foreman, is responsible for all aspects of the payroll and hiring process. Basic internal controls call for a separation of duties between the person approving the payments and the person disbursing the money. In addition, the same person was hiring employees and distributing payroll checks.

In a situation like this, the foreman could enter fictitious workers into the payroll system and pocket their paychecks. Alternatively, the foreman could enter the wrong number of hours for the workers, paying them either too little or too much, and demanding a kickback from them.

Decision Case 7-2, cont.
Requirement 2

Ideally, the distribution of the paychecks should be done by someone other than the foreman, so that if there were some irregularities in the hours recorded or amounts paid, these irregularities would be discovered by the person distributing the paychecks. Also, by having a second person disbursing paychecks, there could be verification that the workers are real, and not fictitious. The following actions could correct the internal control weaknesses:

1. The home-office could send someone out to the worksite to distribute paychecks. That person could ask for identification from workers when they pick up their check.
2. Use a time clock and have employees sign their own time sheets.
3. Have a home-office employee compare signatures on the workers' time sheets to their signatures on file and, occasionally, to their endorsements on the backs of their paychecks.
4. Have a home-office employee go to the construction site occasionally to "take attendance" of workers on duty that day. Then, match the names of workers on duty to the time sheets turned in at the end of the week.
5. Have the employees go to the main corporate office to be officially hired and fill out tax forms. Employees should show proper identification.
6. Have the employees deliver timecards to the corporate office.
7. Have employees fill out their own timecards.
8. Have employees pick up their own checks from the corporate office after showing proper identification.

For many small businesses, however, it is simply not practical or economical to have a separate person to provide this level of control. In that case, management must be aware of the vulnerability, and look for other ways to check against abuse.

Fraud Case 7-1
Requirement 1

There was no separation of duties between cash disbursements and recording transactions in the journal, which allowed Cindy to conceal her activities. Additionally, the payments and bank reconciliations were not being reviewed by the owner. If he had reviewed those materials, he would have likely detected the fraud early.

Requirement 2

Small businesses must first be aware of the risks and vulnerabilities of their business. Then owners must personally review and approve transactions that affect cash. Reviewing bank reconciliations is a key step toward maintaining control over cash.

Financial Statement Case 7-1
Requirement 1

The outside auditing firm is Ernst & Young LLP. It was signed by the Minneapolis office on March 11, 2016.

Requirement 2

The company's management bears primary responsibility for the financial statements.
In the audit report it indicates that "These financial statements are the responsibility of the Corporation's management." The audit report also states that the corporation's management is responsible for maintaining effective internal control over financial reporting.

Requirement 3

It appears that Target's internal controls are adequate. In the audit report it states:
"In our opinion, the Corporation maintained, in all material respects, effective internal control over financial reporting as of January 30, 2016, based on the COSO criteria."

Requirement 4

The audits were conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States).

Requirement 5

Target's cash balance increased by $1,836 million. The beginning balance was $2,210 million and the ending balance was $4,046 million.

Requirement 6

Target Corporation considers all highly liquid instruments with an original maturity of three months or less from the time of purchase to be cash equivalents**.** Cash equivalents also include amounts due from third-party financial institutions for credit and debit card transactions.

Requirement 7

(Numbers in millions)

	January 30, 2016	**January 31, 2015**
Cash and Cash Equivalents	$4,046	$2,210
÷ Total Current Liabilities	12,622	11,736
Cash Ratio	0.321	0.188

Target's cash ratio is slightly better than Kohl's Corporation's in 2016 (0.321 to 0.26) and significantly less in 2015 (0.188 to 0.49). Target's cash ratio increased from 2015 to 2016, while Kohl's Corporation's cash ratio did the opposite. The ratio decreased from 2015 to 2016.

Communication Activity 7-1

The books and the bank statement show different cash balances because of timing differences in recording transactions such as:

1. A business writes a check and immediately deducts the amount in its checkbook and cash account. The bank doesn't subtract the check from the company's account until it pays the check a few days later.
2. A company immediately adds cash receipts for all deposits. It may take a day or two for the bank to add deposits to the company's balance.
3. EFT payments and cash receipts are often recorded by the bank before a company learns of them.

8 Receivables

Should Credit Be Extended?

James Hulsey works for a large department store as a credit manager. His main responsibility is managing all credit sales that generate accounts receivable. James must evaluate each customer's request for credit and determine which customers are allowed to purchase goods on credit. He does this by reviewing the customer's credit history and credit score. James has an important decision to make. He understands that granting credit increases the sales of the department store, but it also has its disadvantages.

One of those disadvantages is that the department store has to wait to receive cash. But, for James, the biggest disadvantage—and the most frustrating part of his job—is when customers don't pay. When this happens, the department store suffers a loss because it will never collect the cash associated with the sale. The department store must have a way to take the accounts of customers who will never make payment off the books; this is called a *write-off*. In addition, James must also help the department store estimate the amount of receivables that will be uncollectible. It's important that the department store have a good idea of the amount of cash that will actually be collected on its receivables so it can estimate future cash flows.

How Are Receivables Accounted For?

In this chapter, we determine how companies account for receivables. Receivables represent the right to receive cash in the future from a current transaction. We begin by looking at how companies such as **Sears Holdings Corporation** (the parent company of Kmart Holding Corporation and Sears, Roebuck and Co.) record accounts receivable, including when customers don't make the required payments. Then we review notes receivable, which usually extend over a longer term than accounts receivable and typically involve interest. We finish the chapter by looking at how companies (and investors) can use financial ratios to evaluate a company's ability to collect cash on accounts receivable.

Chapter 8 Learning Objectives

1 Define and explain common types of receivables and journalize sales on credit

2 Apply the direct write-off method for uncollectibles

3 Apply the allowance method for uncollectibles and estimate bad debts expense based on the percent-of-sales, percent-of-receivables, and aging-of-receivables methods

4 Account for notes receivable including computing interest and recording honored and dishonored notes

5 Use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance

WHAT ARE COMMON TYPES OF RECEIVABLES, AND HOW ARE CREDIT SALES RECORDED?

A **receivable** occurs when a business sells goods or services to another party on account (on credit). It is a monetary claim against a business or an individual. The receivable is the seller's claim for the amount of the transaction. Receivables also occur when a business loans money to another party. A receivable is the right to *receive* cash in the future from a current transaction. It is something the business owns; therefore, it is an asset. *Each* receivable transaction involves two parties:

- The creditor, who receives a receivable (an asset). The creditor will collect cash from the customer or borrower.
- The **debtor**, the party to a credit transaction who takes on an obligation/payable (a liability). The debtor will pay cash later.

Learning Objective 1
Define and explain common types of receivables and journalize sales on credit

Receivable
A monetary claim against a business or an individual.

Debtor
The party to a credit transaction who takes on an obligation/payable.

Types of Receivables

The three major types of receivables are:

- Accounts receivable
- Notes receivable
- Other receivables

Accounts Receivable

Accounts receivable, also called *trade receivables*, represent the right to receive cash in the future from customers for goods sold or for services performed. Accounts receivable are usually collected within a short period of time, such as 30 or 60 days, and are therefore reported as a current asset on the balance sheet.

Accounts Receivable
The right to receive cash in the future from customers for goods sold or for services performed.

Notes Receivable

Notes receivable usually have longer terms than accounts receivable. Notes receivable, sometimes called *promissory notes*, represent a written promise that a customer (or another individual or business) will pay a fixed amount of principal plus interest by a certain date in the future—called the **maturity date**. The maturity date is the date on which the notes receivable is due. A written document known as a promissory note serves as evidence of

Notes Receivable
A written promise that a customer will pay a fixed amount of principal plus interest by a certain date in the future.

Maturity Date
The date when a note is due.

the debt and is signed by the debtor. Notes receivable due within 12 months or within the normal operating cycle if the cycle is longer than a year are considered current assets. Notes receivable due beyond one year are long-term assets.

Other Receivables

Other receivables make up a miscellaneous category that includes any other type of receivable where there is a right to receive cash in the future. Common examples include dividends receivable, interest receivable, and taxes receivable. These other receivables may be either current or long-term assets, depending on whether they will be received within one year or the normal operating cycle if the cycle is longer than a year (current asset) or received more than a year in the future (long-term asset).

Exercising Internal Control Over Receivables

Businesses that sell goods or services on account receive cash by mail, usually in the form of a check, or online payments via electronic funds transfer (EFT), so internal control over collections is important. As we discussed in the previous chapter, a critical element of internal control is the separation of cash-handling and cash-accounting duties.

Most large companies also have a credit department to evaluate customers' credit applications to determine if they meet the company's credit approval standards. The extension of credit is a balancing act. The company does not want to lose sales to good customers, but it also wants to avoid receivables that will never be collected. For good internal control over cash collections from receivables, separation of duties must be maintained. The credit department should have no access to cash, and those who handle cash should not be in a position to grant credit to customers. If a credit department employee also handles cash, he or she could pocket money received from a customer. The employee could then label the customer's account as uncollectible, and the company would stop billing that customer. In this scenario, the employee may have covered his or her theft.

Recording Sales on Credit

As discussed earlier, selling on account (on credit) creates an account receivable. Businesses must maintain a separate accounts receivable account for each customer in order to account for payments received from the customer and amounts still owed.

For example, Smart Touch Learning provides $5,000 in services to customer Brown on account and sells $10,000 (sales price) of merchandise inventory to customer Smith on account on August 8. The revenue is recorded (ignore Cost of Goods Sold) as follows:

A↑	=	L	+	E↑
Accounts Receivable↑				Service Revenue↑

A↑	=	L	+	E↑
Accounts Receivable↑				Sales Revenue↑

Date	Accounts and Explanation	Debit	Credit
Aug. 8	Accounts Receivable—Brown	5,000	
	Service Revenue		5,000
	Performed service on account.		
8	Accounts Receivable—Smith	10,000	
	Sales Revenue		10,000
	Sold goods on account.		

These separate customer accounts receivable (for example, Accounts Receivable—Brown) are called *subsidiary accounts*. The sum of all balances in subsidiary accounts receivable equals a control account balance. In this case, Accounts Receivable serves as the control account. This is illustrated as follows:

CONTROL ACCOUNT

Accounts Receivable		
Bal.	15,000	

SUBSIDIARY ACCOUNTS

Accounts Receivable—Brown		
Bal.	5,000	

Accounts Receivable—Smith		
Bal.	10,000	

Total for subsidiary accounts = $15,000

The control account, Accounts Receivable, shows a balance of $15,000. The individual customer accounts in the subsidiary ledger (Accounts Receivable—Brown $5,000 + Accounts Receivable—Smith $10,000) add up to a total of $15,000.

When the business collects cash from both customers on August 29—$4,000 from Brown and $8,000 from Smith—Smart Touch Learning makes the following entry and posts the entry to the T-accounts:

Date	Accounts and Explanation	Debit	Credit
Aug. 29	Cash	12,000	
	Accounts Receivable—Brown		4,000
	Accounts Receivable—Smith		8,000
	Collected cash on account.		

A↑↓ = L + E
Cash↑
Accounts Receivable↓

CONTROL ACCOUNT

Accounts Receivable			
Bal. 15,000		12,000	Aug. 29
Bal. 3,000			

SUBSIDIARY ACCOUNTS

Accounts Receivable—Brown			
Bal.	5,000	4,000	Aug. 29
Bal.	1,000		

Accounts Receivable—Smith			
Bal.	10,000	8,000	Aug. 29
Bal.	2,000		

Total for subsidiary accounts = $3,000

Decreasing Collection Time and Credit Risk

One of the many drawbacks of accepting sales on account is that the company must wait for the receipt of cash. Sometimes this time period could be delayed as much as 60 to 90 days. In addition, there is always the risk that the company will never collect on the receivable. Let's look at some options companies have to decrease the collection time in receiving cash while also transferring the risk of noncollection to a third party.

Credit Card and Debit Card Sales

In the previous chapter, we looked at accepting third party credit cards and debit cards, such as American Express, MasterCard, and Visa, as a way to increase sales. By accepting credit cards and debit cards, businesses are able to attract more customers. Credit cards offer the customer the convenience of buying something without having to pay cash immediately. Debit cards, on the other hand, reduce the customer's bank account immediately but allow the customer to pay electronically instead of with currency or by writing a check.

Businesses also benefit from accepting payment by credit and debit cards. They do not have to check each customer's credit rating or worry about keeping accounts receivable records or even collecting from the customer because the card issuer has the responsibility of collecting from the customer. Thus, instead of collecting cash from the customer, the seller will receive cash from the card issuer. While there is almost always a fee to the seller to cover the processing costs charged by the card issuer, most businesses consider the benefits of transferring the risk of not being able to collect from the customer and avoiding the costs associated with credit customers are greater than the costs of the processing fees.

Factoring and Pledging Receivables

When a business factors its receivables, it sells its receivables to a finance company or bank (often called a *factor*). The business immediately receives cash less an applicable fee from the factor for the receivables. The factor, instead of the business, now collects the cash on the receivables. The business no longer has to deal with the collection of the receivable from the customer. The business receives cash associated with the receivable from the factor instead of the customer.

Pledging of receivables is another option for businesses that need cash immediately. In a pledging situation, a business uses its receivables as security for a loan. The business borrows money from a bank and offers its receivables as collateral. The business is still responsible for collecting on the receivables, but it uses this money to pay off the loan along with interest. In pledging, if the loan is not paid, the bank can collect on the receivables.

In both situations, the business has managed to receive cash immediately for the receivables instead of having to wait for collection.

Try It!

Match the accounting terminology to the definitions.

1. Factoring receivables	**a.** A monetary claim against a business or an individual.
2. Debtor	**b.** The party to a transaction who takes on an obligation/payable.
3. Accounts receivable	**c.** Using receivables as security (collateral) for a loan.
4. Maturity date	**d.** The right to receive cash in the future from customers for goods sold or for services provided.
5. Receivable	**e.** The date when a note is due.
6. Pledging receivables	**f.** Selling receivables to a finance company or bank.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S8-1 and S8-2. MyAccountingLab

HOW ARE UNCOLLECTIBLES ACCOUNTED FOR WHEN USING THE DIRECT WRITE-OFF METHOD?

Learning Objective 2
Apply the direct write-off method for uncollectibles

Selling on account brings both a benefit and a cost:

- The benefit to a business is the potential increased revenues and profits by making sales to a wider range of customers.
- The cost, however, is that some customers do not pay, creating uncollectible receivables.

Customers' accounts receivable are an asset. Accounts receivable that are uncollectible must be written off, which means they must be removed from the books, because the company does not expect to receive cash in the future. Instead, the company must record an expense associated with the cost of the uncollectible account. This expense is called **bad debts expense**. Bad debts expense is sometimes called *doubtful accounts expense* or *uncollectible accounts expense*.

Bad Debts Expense
The cost to the seller of extending credit. It arises from the failure to collect from some credit customers.

There are two methods of accounting for uncollectible receivables and recording the related bad debts expense:

- Direct write-off method
- Allowance method

Recording and Writing Off Uncollectible Accounts—Direct Write-off Method

The **direct write-off method** of accounting for uncollectible receivables is primarily used by small, nonpublic companies. Under the direct write-off method, accounts receivable are written off and bad debts expense is recorded when the business determines that it will never collect from a specific customer.

Direct Write-off Method
A method of accounting for uncollectible receivables in which the company records bad debts expense when a customer's account receivable is uncollectible.

For example, let's assume that on August 9 Smart Touch Learning determines that it will not be able to collect $200 from customer Dan King for a sale of merchandise inventory made on May 5. The company would write off the customer's account receivable by debiting Bad Debts Expense and crediting the customer's Accounts Receivable as follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 9	Bad Debts Expense	200	
	Accounts Receivable—King		200
	Wrote off an uncollectible account.		

A↓	=	L	+	E↓
Accounts Receivable↓				Bad Debts Expense↑

Once an account receivable is written off, the company stops pursuing the collection. Some companies might turn delinquent receivables over to an attorney or other collection agency to recover some of the cash for the company, but generally companies do not expect to receive any future payment.

Recovery of Accounts Previously Written Off—Direct Write-off Method

Occasionally after a company writes off an account, the customer will decide to make payment. To account for this recovery, the company must reverse the earlier write-off. For example, on September 10, Smart Touch Learning unexpectedly receives $200 cash from

Dan King. The company will reverse the earlier write-off and then record the cash collection as follows:

A↑	=	L	+	E↑
Accounts Receivable↑	=			Bad Debts Expense↓

Date	Accounts and Explanation	Debit	Credit
Sep. 10	Accounts Receivable—King	200	
	Bad Debts Expense		200
	Reinstated previously written off account.		
10	Cash	200	
	Accounts Receivable—King		200
	Collected cash on account.		

A↑↓	=	L	+	E
Cash↑ Accounts Receivable↓	=			

In order to keep accurate records about the collection of cash for a previously written off account, the business should reestablish the Accounts Receivable by debiting the receivable account. Then the business can record the receipt of cash for the receivable by debiting Cash and crediting Accounts Receivable. This helps restore the credit history of the customer by showing that the customer did fulfill the promise of payment.

Limitations of the Direct Write-off Method

The direct write-off method, as stated earlier, is often used only by small, nonpublic companies. This is because the direct write-off method violates the matching principle. The matching principle requires that the expense of uncollectible accounts be matched with the related revenue. For example, when using the direct write-off method, a company might record sales revenue in 2017 but not record the bad debts expense until 2018. By recording the bad debts expense in a different year than when the revenue was recorded, the company is overstating net income in 2017 and understating net income in 2018. In addition, on the balance sheet at December 31, 2017, Accounts Receivable will be overstated because the company will have some receivables that will be uncollectible but are not yet written off. This method is only acceptable for companies that have very few uncollectible receivables. Most companies must use a method that does a better job of matching expenses to the associated sales revenue. This method is called the *allowance method*, and it is the method required by GAAP.

Try It!

Williams Company uses the direct write-off method to account for uncollectible receivables. On July 18, Williams wrote off a $6,800 account receivable from customer W. Jennings. On August 24, Williams unexpectedly received full payment from Jennings on the previously written off account.

7. Journalize Williams's write-off on the uncollectible receivable.
8. Journalize Williams's collection of the previously written off receivable.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S8-3 and S8-4. MyAccountingLab

HOW ARE UNCOLLECTIBLES ACCOUNTED FOR WHEN USING THE ALLOWANCE METHOD?

Learning Objective 3
Apply the allowance method for uncollectibles and estimate bad debts expense based on the percent-of-sales, percent-of-receivables, and aging-of-receivables methods

Most companies use the allowance method to measure bad debts. The **allowance method** is based on the matching principle; thus, the key concept is to record bad debts expense in the same period as the sales revenue. The offset to the expense is a contra asset account called **Allowance for Bad Debts** or *Allowance for Doubtful Accounts* or *Allowance for Uncollectible Accounts*. The allowance account is subtracted from the asset Accounts Receivable. The business does not wait to see which customers will not pay. Instead, it records a bad debts expense based on estimates developed from past experience and uses the Allowance for Bad Debts to hold the pool of "unknown" uncollectible accounts.

Allowance Method
A method of accounting for uncollectible receivables in which the company estimates bad debts expense instead of waiting to see which customers the company will not collect from.

Allowance for Bad Debts
A contra asset account, related to accounts receivable, that holds the estimated amount of uncollectible accounts.

Recording Bad Debts Expense—Allowance Method

When using the allowance method, companies estimate bad debts expense at the end of the period and then record an adjusting entry. Suppose that as of December 31, 2019, Smart Touch Learning estimates that $80 of its $4,400 accounts receivable are uncollectible. The accounting clerk will record the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Bad Debts Expense	80	
	Allowance for Bad Debts		80
	Recorded bad debts expense for the period.		

A↓ = L + E↓
Allowance for Bad Debts↑ | | Bad Debts Expense↑

After posting the adjusting entry, Smart Touch Learning has the following balances in its accounts:

Accounts Receivable

Dec. 31 4,400	

Allowance for Bad Debts

	80 Dec. 31

Bad Debts Expense

Dec. 31 80	

Accounts Receivable will be reported on the balance sheet, but it will now be shown at the net realizable value. **Net realizable value** is the net value the company expects to

Net Realizable Value
The net value a company expects to collect from its accounts receivable. Accounts Receivable less Allowance for Bad Debts.

collect from its accounts receivable (Accounts Receivable less Allowance for Bad Debts). Smart Touch Learning would report the following on its balance sheet:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2019		
Assets		
Current Assets:		
Accounts Receivable	$ 4,400	
Less: Allowance for Bad Debts	(80)	$ 4,320

Under IFRS, receivables are recognized and reported similarly to what is required by GAAP. Accounts Receivable must be reported at net realizable value. The allowance method is used to accomplish the matching of bad debt expense to the sales of the period and to report receivables at net realizable value. Under IFRS, the Allowance for Bad Debts may be called the *Provision for Bad Debts*. IFRS provides more detailed criteria than GAAP for determining when an account is uncollectible.

The balance sheet now reports the amount of accounts receivable that Smart Touch Learning expects to collect, $4,320. The contra account, Allowance for Bad Debts, is subtracted from Accounts Receivable showing that although $4,400 is owed to Smart Touch Learning, the company estimates that $80 of accounts receivable will be uncollectible.

ETHICS

Should the uncollectible accounts be underestimated?

Norah Wang is in the process of recording adjusting entries for her employer, Happy Kennels. She is evaluating the uncollectible accounts and determining the amount of bad debts expense to record for the year. Her manager, Gillian Tedesco, has asked that Norah underestimate the amount of uncollectible accounts for the year. Gillian is hoping to get a bank loan for an expansion of the kennel facility, and she is concerned that the net income of the company will be too low for a loan to be approved. What should Norah do?

Solution

It is important that accounts receivable be reported at the appropriate amount on the balance sheet. This involves determining an accurate estimate of uncollectible accounts and recognizing the associated bad debts expense. In understating the amount of uncollectible accounts, Norah would be misleading the bank on the amount of cash that Happy Kennels expects to collect in the future. Norah would also understate Bad Debts Expense and overstate net income on the income statement.

Writing Off Uncollectible Accounts—Allowance Method

Why isn't Bad Debts Expense debited when writing off an account receivable when using the allowance method?

When using the allowance method, companies still write off accounts receivable that are uncollectible. However, instead of recording a debit to Bad Debts Expense (as done when using the direct write-off method), the company will record a debit to Allowance for Bad Debts. **Bad Debts Expense is not debited when a company writes off an account receivable when using the allowance method because the company has already recorded the Bad Debts Expense as an adjusting entry.** The entry to write off an account under the allowance method has no effect on net income at the time of entry.

For example, on January 10, 2020, Smart Touch Learning determines that it cannot collect a total of $25 from its customer, Shawn Clark. The accounting clerk would record the following entry to write off the account:

Date	Accounts and Explanation	Debit	Credit
2020			
Jan. 10	Allowance for Bad Debts	25	
	Accounts Receivable—Clark		25
	Wrote off an uncollectible account.		

A↑↓	=	L	+	E
Allowance for Bad Debts↓ Accounts Receivable↓				

Smart Touch Learning's account balances after the write-off are:

Accounts Receivable

Jan. 1, 2020	4,400		
		25	Jan. 10, 2020
Bal.	4,375		

Allowance for Bad Debts

		80	Jan. 1, 2020
Jan. 10, 2020	25		
		55	Bal.

The entry to write off a receivable reduces the amount of the Allowance for Bad Debts account and also the Accounts Receivable account, but it does not affect the net realizable value shown on the balance sheet. This is because both Allowance for Bad Debts (contra asset) and Accounts Receivable (asset) were reduced by the amount of the write-off. In addition, the write-off of a receivable does not affect net income because the entry does not involve revenue or expenses.

	Before Write-off	After Write-off
Accounts Receivable	$ 4,400	$ 4,375
Less: Allowance for Bad Debts	(80)	(55)
Net Realizable Value	$ 4,320	$ 4,320

Recovery of Accounts Previously Written Off—Allowance Method

After a company has previously written off an account, the company stops attempting to collect on the receivable. Customers will occasionally make payment on receivables that have already been written off. A business will need to reverse the write-off to the Allowance for Bad Debts account and then record the receipt of cash. In reversing the write-off, the business is reestablishing the receivable account and reversing the write-off from the Allowance for Bad Debts account.

Recall that Smart Touch Learning wrote off the $25 receivable from customer Shawn Clark on January 10, 2020. It is now March 4, 2020, and Smart Touch Learning unexpectedly

receives $25 cash from Clark. The entries to reverse the write-off and record the receipt of cash are as follows:

A↑↓		L + E
Accounts Receivable↑ Allowance for Bad Debts↑	=	

A↑↓		L + E
Cash↑ Accounts Receivable↓	=	

Date	Accounts and Explanation	Debit	Credit
2020			
Mar. 4	Accounts Receivable—Clark	25	
	Allowance for Bad Debts		25
	Reinstated previously written off account.		
4	Cash	25	
	Accounts Receivable—Clark		25
	Collected cash on account.		

Estimating and Recording Bad Debts Expense—Allowance Method

How do companies determine the amount of bad debts expense when using the allowance method? Companies use their past experience as well as consider the economy, the industry they operate in, and other variables. In short, they make an educated guess, called an *estimate*. There are three basic ways to estimate uncollectibles:

- Percent-of-sales
- Percent-of-receivables
- Aging-of-receivables

Percent-of-Sales Method

Percent-of-Sales Method
A method of estimating uncollectible receivables that calculates bad debts expense based on a percentage of net credit sales.

The **percent-of-sales method** computes bad debts expense as a percentage of net credit sales. (Some companies will use all sales, not just credit sales.) This method is also called the *income-statement approach* because it focuses on the amount of expense that is reported on the income statement.

Let's return to Smart Touch Learning. Based on prior experience, the company's bad debts expense is normally 0.5% of net credit sales, which totaled $60,000 for the year. The accountant calculates bad debts expense using the percent-of-sales method as follows:

Percent-of-Sales Method:

Bad Debts Expense = Net credit sales × %
= $60,000 × 0.005
= $300

At December 31, Smart Touch Learning records the following adjusting entry to recognize bad debts expense for the year:

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense	300	
	Allowance for Bad Debts		300
	Recorded bad debts expense for the period.		

A↓		L	+	E↓
Allowance for Bad Debts↑	=			Bad Debts Expense↑

When using the allowance method, the only time Bad Debts Expense is recorded is as an adjusting entry.

After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts. Ignore the previously recorded reversal of the write-off and assume collections on account during the year are $58,000:

Balance sheet accounts:

Accounts Receivable

Jan. 1, 2020, Bal.	4,400		
Net credit sales	60,000	25	Write-off
		58,000	Collections
Unadj. Bal.	6,375		
Dec. 31, 2020, Bal.	**6,375**		

Allowance for Bad Debts

		80	Jan. 1, 2020, Bal.
Write-off	25		
		55	Unadj. Bal.
		300	Adj.
		355	**Dec. 31, 2020, Bal.**

Income statement account:

Bad Debts Expense

Jan. 1, 2020, Bal.	0	
Adj.	300	
Dec. 31, 2020, Bal.	**300**	

Percent-of-Receivables Method

The percent-of-receivables and aging-of-receivables methods are based on the balance of accounts receivable. These approaches are also called *balance-sheet approaches* because they focus on Accounts Receivable (a balance sheet account) and determine a target allowance balance based on a percentage of the receivable balance.

The first balance sheet approach is the **percent-of-receivables method**. In the percent-of-receivables method, the business once again determines a percentage of uncollectible accounts based on past experience. This method is different than the percent-of-sales method because it multiplies the percentage by the *ending* unadjusted balance in the Accounts Receivable account instead of by net credit sales.

Percent-of-Receivables Method
A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on a percentage of accounts receivable.

The calculation for bad debts expense under the percent-of-receivables method is a two-step process. First, the company determines the target balance of Allowance for Bad Debts. Then, it uses the target balance to determine the amount of the bad debts expense.

Percent-of-Receivables Method:

Step 1: Determine the target balance of Allowance for Bad Debts.

Target balance = Ending balance of accounts receivable × %

Step 2: Determine the amount of bad debts expense by evaluating the allowance account.

Bad debts expense = Target balance − Unadjusted credit balance of Allowance for Bad Debts

OR

Bad debts expense = Target balance + Unadjusted debit balance of Allowance for Bad Debts

Let's look at an example for Smart Touch Learning. Assume that at December 31, 2020, the company's unadjusted accounts receivable balance is $6,375. Smart Touch Learning estimates that 4% of its accounts receivable will be uncollectible. In Step 1, the company determines the target balance for the Allowance for Bad Debts account: $255 ($6,375 × 0.04). Next, its accountant determines the amount of the bad debts expense adjustment: $255 − $55 = $200.

Allowance for Bad Debts

		80	Jan. 1, 2020, Bal.
Write-offs	25		
		55	Unadj. Bal.
		200	Adj.
		255	**Dec. 31, 2020, Bal.**

Step 2: The bad debts expense adjustment must be calculated based on the target balance.
$255 − $55 = $200

Step 1: Calculate the target balance. It is always reported as a credit balance.
$6,375 × 0.04 = $255

Smart Touch Learning records the following adjusting entry on December 31 to recognize bad debts expense for the year:

A↓ Allowance for Bad Debts↑ } = { L + E↓ Bad Debts Expense↑

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense	200	
	Allowance for Bad Debts		200
	Recorded bad debts expense for the period.		

After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts:

Balance sheet accounts:

Accounts Receivable

Jan. 1, 2020, Bal.	4,400		
Net credit sales	60,000	25	Write-offs
		58,000	Collections
Unadj. Bal.	6,375		
Dec. 31, 2020, Bal.	**6,375**		

Allowance for Bad Debts

		80	Jan. 1, 2020, Bal.
Write-offs	25		
		55	Unadj. Bal.
		200	Adj.
		255	**Dec. 31, 2020, Bal.**

The Allowance for Bad Debts has a credit unadjusted balance because the company overestimated the bad debt expense and has written off less accounts receivable than it expected during the year.

Income statement account:

Bad Debts Expense

Jan. 1, 2020, Bal.	0		
Adj.	200		
Dec. 31, 2020, Bal.	**200**		

In the preceding example, Smart Touch Learning had an unadjusted *credit* balance in the allowance account. **If a company has a debit balance before the adjustment, the calculation for bad debts expense is a little different. Instead of subtracting the unadjusted balance of the Allowance for Bad Debts from the target balance, the unadjusted balance will be added to the target balance.**

Let's look at an example. Suppose that Martin's Music has a *debit* balance in its Allowance for Bad Debts account of $150. Assume that it estimates its percentage of uncollectible accounts will be 2% of $40,000 of Accounts Receivable. Martin's Music's bad debts expense adjustment would be calculated as follows:

What if a business had a debit balance in the Allowance for Bad Debts account before the adjustment for bad debts expense?

Allowance for Bad Debts

Unadj. Bal.	150		
		950	Adj.
		800	**Bal.**

Step 2: The bad debts expense adjustment must be calculated based on the target balance. $800 + $150 = $950

Step 1: Calculate the target balance. It is always reported as a credit balance. $40,000 × 0.02 = $800

A company will have a debit unadjusted balance in the Allowance for Bad Debts account if the company has underestimated the bad debt expense and written off more accounts receivable than it expected to during the year.

Notice that when the allowance account has an unadjusted debit balance, the target balance must be added to the unadjusted balance of the Allowance for Bad Debts to

determine the bad debts expense adjustment. Martin's Music would record the following adjusting entry to recognize bad debts expense:

A↓		L	+	E↓
Allowance for Bad Debts↑	=			Bad Debts Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Bad Debts Expense	950	
	Allowance for Bad Debts		950
	Recorded bad debts expense for the period.		

Aging-of-Receivables Method

Aging-of-Receivables Method
A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on the age of individual accounts receivable.

The **aging-of-receivables method** is similar to the percent-of-receivables method. However, in the aging method, businesses group individual accounts (Broxson, Andrews, and so on) according to how long the receivable has been outstanding. Then they apply a different percentage uncollectible on each aging category. Exhibit 8-1 shows the aging schedule for Smart Touch Learning.

Exhibit 8-1 | **Aging of Accounts Receivable**

Age of Account as of December 31, 2020					
Customer Name	1–30 Days	31–60 Days	61–90 Days	Over 90 Days	Total Balance
Broxson	$ 800				$ 800
Phi Chi Fraternity	2,100				2,100
Andrews		$ 350			350
Jones		480			480
Perez	1,345				1,345
Thompson			$ 1,200		1,200
Clark				$ 100	100
Totals	$ 4,245	$ 830	$ 1,200	$ 100	$ 6,375
Estimated percentage uncollectible	× 1%	× 2%	× 3%	× 90%	
Estimated total uncollectible	$ 42	$ 17	$ 36	$ 90	$ 185

Target balance

At year-end, Smart Touch Learning will need to record the adjusting entry to recognize bad debts expense. The procedure is similar to the percent-of-receivables method.

Aging-of-Receivables Method:

Step 1: Determine the target balance of Allowance for Bad Debts by using the age of each account.

Step 2: Determine the amount of bad debts expense by evaluating the allowance account.

Bad debts expense = Target balance − Unadjusted credit balance of Allowance for Bad Debts

OR

Bad debts expense = Target balance + Unadjusted debit balance of Allowance for Bad Debts

Based on Exhibit 8-1, Smart Touch Learning knows the target balance of the Allowance for Bad Debts account is \$185. Smart Touch Learning will determine its bad debts expense by subtracting the \$55 unadjusted credit balance in the allowance account from the target balance, \$185.

Allowance for Bad Debts

		80	Jan. 1, 2020, Bal.
Write-offs	25		
		55	Unadj. Bal.
		130	Adj.
		185	**Dec. 31, 2020, Bal.**

Step 2: The bad debts expense adjustment must be calculated based on the target balance. \$185 − \$55 = \$130

Step 1: Calculate the target balance using the aging schedule. It is always reported as a credit balance.

Smart Touch Learning will record the following adjusting entry on December 31 to recognize bad debts expense for the year:

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense	130	
	Allowance for Bad Debts		130
	Recorded bad debts expense for the period.		

A↓	=	L	+	E↓
Allowance for Bad Debts↑				Bad Debts Expense↑

After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts:

Balance sheet accounts:

Accounts Receivable

Jan. 1, 2020, Bal.	4,400		
Net credit sales	60,000	25	Write-offs
		58,000	Collections
Unadj. Bal.	6,375		
Dec. 31, 2020, Bal.	**6,375**		

Allowance for Bad Debts

		80	Jan. 1, 2020, Bal.
Write-offs	25		
		55	Unadj. Bal.
		130	Adj.
		185	**Dec. 31, 2020, Bal.**

Income statement account:

Bad Debts Expense

Jan. 1, 2020, Bal.	0		
Adj.	130		
Dec. 31, 2020, Bal.	**130**		

Comparison of Accounting for Uncollectibles

Exhibit 8-2 (on the next page) shows the journal entries that are recorded when using both the direct write-off method and the allowance method of accounting for uncollectibles. Take a moment to review the differences in these two methods. Remember that when using the direct write-off method, the business does not use an allowance account and that this method does not conform with GAAP.

Exhibit 8-2 | **Direct Write-off Method Versus Allowance Method**

DIRECT WRITE-OFF METHOD			ALLOWANCE METHOD		
Write-off of an uncollectible account:					
Bad Debts Expense	25		Allowance for Bad Debts	25	
Accounts Receivable—Customer Name		25	Accounts Receivable—Customer Name		25
Wrote off an uncollectible account.			*Wrote off an uncollectible account.*		
Recovery of accounts previously written off:					
Accounts Receivable—Customer Name	25		Accounts Receivable—Customer Name	25	
Bad Debts Expense		25	Allowance for Bad Debts		25
Reinstated previously written off account.			*Reinstated previously written off account.*		
Cash	25		Cash	25	
Accounts Receivable—Customer Name		25	Accounts Receivable—Customer Name		25
Collected cash on account.			*Collected cash on account.*		
Adjusting entry to recognize bad debts:					
No adjusting entry recorded.			Bad Debts Expense	300	
			Allowance for Bad Debts		300
			Recorded bad debts expense for the period.		

Under the allowance method of accounting for uncollectibles, businesses must estimate the amount of the bad debts expense at the end of the accounting period. This is done using one of three methods: percent-of-sales, percent-of-receivables, or aging-of-receivables. Exhibit 8-3 summarizes the differences in those three methods.

Exhibit 8-3 | **Comparison of Percent-of-Sales, Percent-of-Receivables, and Aging-of-Receivables Methods**

ALLOWANCE METHOD

INCOME STATEMENT APPROACH:

Percent-of-Sales Method

Bad Debts Expense = Net credit sales × %

BALANCE SHEET APPROACHES:

Percent-of-Receivables Method

Aging-of-Receivables Method

Step 1:
Target balance = Ending balance of Accounts Receivable × %

Step 2:
Bad debts expense = Target balance − Unadj. *credit* balance in Allowance for Bad Debts

OR

Bad debts expense = Target balance + Unadj. *debit* balance in Allowance for Bad Debts

TYING IT ALL TOGETHER

Sears Holdings Corporation is the parent company of Kmart Holding Corporation and Sears, Roebuck and Co. The corporation operates more than 1,600 retail stores under the names of Kmart and Sears. In addition, the corporation has a large online presence through its Web sites sears.com and kmart.com and offers millions of products to its customers—including home appliances, tools, lawn and garden, fitness equipment, and automotive repair and maintenance. (You can find Sears Holdings Corporation's annual report at https://www.sec.gov/Archives/edgar/data/1310067/000131006716000059/shld201510k.htm)

Sears Holdings Corporation reported Accounts Receivable of $419 million as of January 30, 2016. What do these receivables represent?

Sears Holdings Corporation's annual report states the accounts receivable relate to customer-related accounts receivable, including receivables related to the company's pharmacy operations.

Which method, the direct write-off method or the allowance method, would Sears Holdings Corporation use to account for bad debts? Why?

The corporation uses the allowance method to account for bad debts. On the corporation's financial statements, the company states that accounts receivables are reported at net realizable value. Net realizable value is the amount the company expects to collects from its accounts receivable (Accounts Receivable less Allowance for Bad Debts). Sears Holdings Corporation uses the allowance method because this method provides a better matching of bad debts expense with the sales revenue.

Try It!

Johnson Company uses the allowance method to account for uncollectible receivables. On September 2, Johnson wrote off a $14,000 account receivable from customer J. Mraz. On December 12, Johnson unexpectedly received full payment from Mraz on the previously written off account. Johnson records an adjusting entry for bad debts expense of $800 on December 31.

9. Journalize Johnson's write-off of the uncollectible receivable.
10. Journalize Johnson's collection of the previously written off receivable.
11. Journalize Johnson's adjustment for bad debts expense.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S8-5 through S8-8. MyAccountingLab

HOW ARE NOTES RECEIVABLE ACCOUNTED FOR?

Learning Objective 4
Account for notes receivable including computing interest and recording honored and dishonored notes

Notes receivable are more formal than accounts receivable. The debtor signs a promissory note as evidence of the transaction. Before launching into the accounting, let's define the special terms used for notes receivable:

- **Promissory note**—A written promise to pay a specified amount of money at a particular future date, usually with interest.
- **Maker of the note (debtor)**—The entity that signs the note and promises to pay the required amount; the maker of the note is the debtor.
- **Payee of the note (creditor)**—The entity to whom the maker promises future payment; the payee of the note is the creditor. The creditor is the company that loans the money.
- **Principal**—The amount loaned by the payee and borrowed by the maker of the note.
- **Interest**—The revenue to the payee for loaning money. Interest is an expense to the debtor and revenue to the creditor.

Principal
The amount loaned out by the payee and borrowed by the maker of the note.

Interest
The revenue to the payee for loaning money—the expense to the debtor.

Interest Period
The period of time during which interest is computed. It extends from the original date of the note to the maturity date.

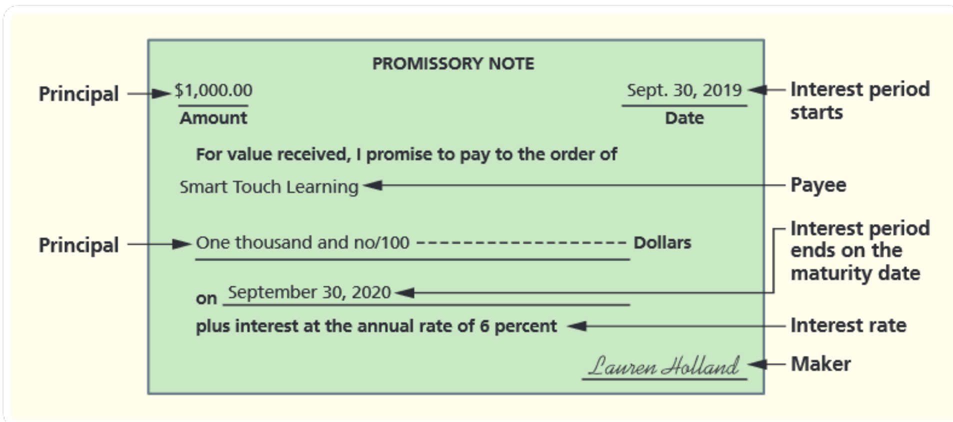
Interest Rate
The percentage rate of interest specified by the note.

Maturity Value
The sum of the principal plus interest due at maturity.

- **Interest period**—The period of time during which interest is computed. It extends from the original date of the note to the maturity date. Also called the *note term*.
- **Interest rate**—The percentage rate of interest specified by the note. Interest rates are almost always stated for a period of one year.
- **Maturity date**—As stated earlier, this is the date when final payment of the note is due. Also called the *due date*.
- **Maturity value**—The sum of the principal plus interest due at maturity. Maturity value is the total amount that will be paid back.

Exhibit 8-4 illustrates a promissory note.

Exhibit 8-4 | **Promissory Note**



In Exhibit 8-4, we can see Smart Touch Learning is lending Lauren Holland $1,000 on September 30, 2019, for one year at an annual interest rate of 6%. The accounting clerk for Smart Touch Learning would record the following journal entry:

A↑↓ = L + E
Notes Receivable↑
Cash↓

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 30	Notes Receivable—Holland	1,000	
	Cash		1,000
	Accepted note in exchange for cash.		

Identifying Maturity Date

Some notes specify the maturity date. For example, September 30, 2020, is the maturity date of the note shown in Exhibit 8-4. Other notes state the period of the note in days or months. When the period is given in months, the note's maturity date falls on the same day of the month as the date the note was issued. For example, a six-month note dated February 16, 2019, would mature on August 16, 2019.

When the period is given in days, the maturity date is determined by counting the actual days from the date of issue. A 180-day note dated February 16, 2019, matures on August 15, 2019, as shown here:

Month	Number of Days	Cumulative Total
Feb. 2019	28 – 16 = 12	12
Mar. 2019	31	43
Apr. 2019	30	73
May 2019	31	104
Jun. 2019	30	134
Jul. 2019	31	165
Aug. 2019	15	180

In counting the number of days in a note term, remember to:

- Count the maturity date.
- Omit the date the note was issued.

Computing Interest on a Note

The formula for computing the interest is as follows:

Amount of interest = Principal × Interest rate × Time

In the formula, time (period) represents the portion of a year that interest has accrued on the note. It may be expressed as a fraction of a year in months (number of months/12) or a fraction of a year in days (number of days/365). Using the data in Exhibit 8-4, Smart Touch Learning computes interest revenue for one year as follows:

Amount of interest = Principal × Interest rate × Time
= $1,000 × 0.06 × 12/12
= $60

The maturity value of the note is $1,060 ($1,000 principal + $60 interest). The time element is 12/12 or 1 because the note's term is one year.

When the term of a note is stated in months, we compute the interest based on the 12-month year. Interest on a $2,000 note at 10% for nine months is computed as follows:

Amount of interest = Principal × Interest rate × Time
= $2,000 × 0.10 × 9/12
= $150

When the interest period is stated in days, we sometimes compute interest based on a 360-day year rather than on a 365-day year. A 360-day year eliminates some rounding and was used frequently in the past. However, with the use of computers to calculate interest, a 365-day year is much more common now. A 365-day year will be used for all calculations in this chapter. The interest on a $5,000 note at 12% for 60 days can be computed as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time}\\ &= \$5{,}000 \times 0.12 \times 60/365\\ &= \$98.63 \text{ (rounded)}\end{aligned}$$

Keep in mind that interest rates are stated as an annual rate. Therefore, the time in the interest formula should also be expressed in terms of a fraction of one year.

Accruing Interest Revenue and Recording Honored Notes Receivable

Some notes receivable may be outstanding at the end of an accounting period. The interest revenue earned on the note up to year-end is part of that year's earnings. Recall that interest revenue is earned over time, not just when cash is received. Because of the revenue recognition principle, we want to record the earnings from the note in the year in which they were earned.

Now, we continue analyzing Smart Touch Learning's note receivable from Exhibit 8-4. Smart Touch Learning's accounting period ends December 31.

- How much of the total interest revenue does Smart Touch Learning earn in 2019 (from September 30 through December 31)? Smart Touch Learning earns three months (October, November, and December) of interest.

$$\$1{,}000 \times 0.06 \times 3/12 = \$15$$

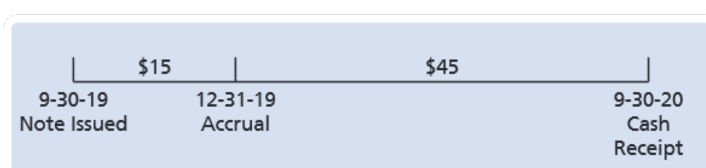
The accounting clerk makes the following adjusting entry at December 31, 2019:

A↑	=	L	+	E↑
Interest Receivable↑				Interest Revenue↑

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Interest Receivable	15	
	Interest Revenue		15
	Accrued interest revenue.		

- How much interest revenue does Smart Touch Learning earn in 2020 (for January 1 through September 30)? Smart Touch Learning earns nine months (January through September) of interest.

$$\$1{,}000 \times 0.06 \times 9/12 = \$45$$



On the maturity date of the note, Smart Touch Learning will receive cash for the principal amount plus interest. The company considers the note honored and makes the following entry:

Date	Accounts and Explanation	Debit	Credit
2020			
Sep. 30	Cash (\$1,000 + (\$1,000 × 0.06 × 12/12))	1,060	
	Notes Receivable—Holland		1,000
	Interest Receivable		15
	Interest Revenue		45
	Collected note receivable plus interest.		

$$\frac{\mathbf{A}\uparrow}{\text{Cash}\uparrow \quad \text{Notes Receivable}\downarrow \quad \text{Interest Receivable}\downarrow}\Bigg\} = \Bigg\{\frac{\mathbf{L}}{} + \frac{\mathbf{E}\uparrow}{\text{Interest Revenue}\uparrow}$$

Some companies sell merchandise in exchange for notes receivable. Assume that on July 1, 2019, Rosa Electric sells household appliances for \$2,000 to Dorman Builders. Dorman signs a nine-month promissory note at 10% annual interest. Rosa's entries to record the sale (ignore Cost of Goods Sold), interest accrual, and collection from Dorman are as follows:

Date	Accounts and Explanation	Debit	Credit
2019			
Jul. 1	Notes Receivable—Dorman Builders	2,000	
	Sales Revenue		2,000
Dec. 31	Interest Receivable (\$2,000 × 0.10 × 6/12)	100	
	Interest Revenue		100
2020			
Apr. 1	Cash (\$2,000 + (\$2,000 × 0.10 × 9/12))	2,150	
	Notes Receivable—Dorman Builders		2,000
	Interest Receivable		100
	Interest Revenue (\$2,000 × 0.10 × 3/12)		50

$$\frac{\mathbf{A}\uparrow}{\text{Notes Receivable}\uparrow}\Bigg\} = \Bigg\{\frac{\mathbf{L}}{} + \frac{\mathbf{E}\uparrow}{\text{Sales Revenue}\uparrow}$$

$$\frac{\mathbf{A}\uparrow}{\text{Interest Receivable}\uparrow}\Bigg\} = \Bigg\{\frac{\mathbf{L}}{} + \frac{\mathbf{E}\uparrow}{\text{Interest Revenue}\uparrow}$$

$$\frac{\mathbf{A}\uparrow}{\text{Cash}\uparrow \quad \text{Notes Receivable}\downarrow \quad \text{Interest Receivable}\downarrow}\Bigg\} = \Bigg\{\frac{\mathbf{L}}{} + \frac{\mathbf{E}\uparrow}{\text{Interest Revenue}\uparrow}$$

A company may accept a note receivable from a credit customer who fails to pay an account receivable. The customer signs a promissory note and gives it to the creditor. Suppose Sports Club cannot pay Blanding Services the amount due on accounts

receivable of $5,000. Blanding may accept a 60-day, $5,000 note receivable, with 12% interest, from Sports Club on November 19, 2019. Blanding's entries are as follows:

A↑↓ = L + E
Notes Receivable↑
Accounts Receivable↓

A↑ = L + E↑
Interest Receivable↑ | Interest Revenue↑

A↑ = L + E↑
Cash↑ Notes Receivable↓ Interest Receivable↓ | Interest Revenue↑

Date	Accounts and Explanation	Debit	Credit
2019			
Nov. 19	Notes Receivable—Sports Club	5,000	
	Accounts Receivable—Sports Club		5,000
Dec. 31	Interest Receivable ($5,000 × 0.12 × 42/365)*	69	
	Interest Revenue		69
2020			
Jan. 18	Cash ($5,000 + ($5,000 × 0.12 × 60/365))*	5,099	
	Notes Receivable—Sports Club		5,000
	Interest Receivable		69
	Interest Revenue ($5,000 × 0.12 × 18/365)*		30

*rounded

Recording Dishonored Notes Receivable

Dishonor a Note
Failure of a note's maker to pay a note receivable at maturity.

If the maker of a note does not pay at maturity, the maker **dishonors a note** (also called *defaulting on a note*). Because the note has expired, it is no longer in force. But the debtor still owes the payee. The payee can transfer the note receivable amount to Accounts Receivable. Suppose Rubinstein Jewelers has a six-month, 10% note receivable for $1,200 from Mark Adair that was signed on March 3, 2019, and Adair defaults. Rubinstein Jewelers will record the default on September 3, 2019, as follows:

A↑ = L + E↑
Accounts Receivable↑
Notes Receivable↓ | Interest Revenue↑

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 3	Accounts Receivable—Adair	1,260	
	Notes Receivable—Adair		1,200
	Interest Revenue ($1,200 × 0.10 × 6/12)		60

Rubinstein will then bill Adair for the account receivable. This also allows Rubinstein to eventually write off the receivable using either the direct write-off method or the allowance method if at a later date Rubinstein can still not collect the account receivable.

Try It!

On August 1, Taylor Company lent $80,000 to L. King on a 90-day, 5% note.

12. Journalize for Taylor Company the lending of the money on August 1.
13. Journalize the collection of the principal and interest at maturity. Specify the date. Round interest to the nearest dollar.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S8-9 through S8-12. MyAccountingLab

HOW DO WE USE THE ACID-TEST RATIO, ACCOUNTS RECEIVABLE TURNOVER RATIO, AND DAYS' SALES IN RECEIVABLES TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5
Use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance

As discussed earlier in the text, the balance sheet lists assets in the order of liquidity (how quickly an asset can be converted to cash). We can evaluate a company's liquidity by analyzing the company's current assets. The partial balance sheet of **Kohl's Corporation**, shown in Exhibit 8-5, list only three current assets: cash and cash equivalents, merchandise inventories, and other current assets. Kohl's does not list any receivables on its balance sheet. While the company does promote and accept the private label Kohl's credit card, the card is issued by an unrelated third party. When the company accepts the private label Kohl's card, the sales are accounted for similar to other credit card sales, such as American Express, MasterCard, and Visa. Kohl's has transferred the risk of collecting cash from its customers to a third party.

Exhibit 8-5 | **Kohl's Corporation Partial Balance Sheet**

KOHL'S CORPORATION
Balance Sheet (Partial)
January 30, 2016, and January 31, 2015
(in millions)

Assets	Jan. 30, 2016	Jan. 31, 2015
Current Assets:		
Cash and Cash Equivalents	$ 707	$ 1,407
Merchandise Inventories	4,038	3,814
Other Current Assets	331	359
Total Current Assets	$ 5,076	$ 5,580
Total Current Liabilities	$ 2,714	$ 2,859

Balance sheet data is useful by showing the relationships among assets, liabilities, and revenues. Because Kohl's does not list receivables on its balance sheet, we will use one of its competitors to examine three important ratios that include receivables in the calculations. **Sears Holdings Corporation** is the parent company of Kmart Holdings Corporation and Sears, Roebuck and Co. The following is a summary of financial information for Sears Holdings Corporation (with all amounts shown in millions):

(In millions)	Jan. 30, 2016	Jan. 31, 2015
Balance sheet—partial		
Current Assets:		
Cash and Cash Equivalents	$ 238	$ 250
Accounts Receivable	419	429
Merchandise Inventories	5,172	4,943
Prepaid Expenses and Other Current Assets	216	241
Total Current Assets	6,045	5,863
Total Current Liabilities	5,438	5,595
Income statement—partial		
Merchandise Sales and Services	25,146	31,198

Acid-Test (or Quick) Ratio

Acid-Test Ratio
The ratio of the sum of cash, cash equivalents, short-term investments, and net current receivables to total current liabilities. The ratio tells whether the entity could pay all its current liabilities if they came due immediately. (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities.

Previously we discussed the current ratio, which measures a company's ability to pay current liabilities with current assets, and the cash ratio, which measures a company's ability to meet its short-term obligations with cash and cash equivalents. We now introduce the **acid-test ratio**, also called the *quick ratio*, which is also used to measure a company's ability to pay its current liabilities. The acid-test ratio is a more stringent measure than the current ratio but it is not as stringent as the cash ratio. The acid test is a ratio of the sum of a company's quick assets to total current liabilities. Quick assets are defined as cash including cash equivalents, short-term investments, and net current receivables. The acid-test ratio reveals whether the entity could pay all its current liabilities if they were to become due immediately.

The higher the acid-test ratio, the more able the business is to pay its current liabilities. Sears Holdings Corporation's acid-test ratio of 0.12 as of January 30, 2016, means that the business has $0.12 of quick assets to pay each $1.00 of current liabilities.

Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities
= ($238 + $419) / $5,438
= 0.12 (rounded)

What is an acceptable acid-test ratio? That depends on the industry. In general, an acid-test ratio of 1.00 or higher is considered safe. It is not uncommon, though, for retail stores such as Sears Holdings Corporation to have low acid-test ratios. Remember, an acceptable acid-test ratio depends on the industry.

Accounts Receivable Turnover Ratio

The **accounts receivable turnover ratio** measures the number of times the company collects the average accounts receivable balance in a year. The higher the ratio, the faster the cash collections. Sears Holdings Corporation's accounts receivable turnover ratio, presented below, indicates that the business turns over its receivables 59.31 times a year.

Accounts Receivable Turnover Ratio
A ratio that measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable.

Accounts receivable turnover ratio	= Net credit sales / Average net accounts receivable
	= \$25,146 / [(\$419 + \$429) / 2]
	= 59.31 times (rounded)

In calculating the accounts receivable turnover ratio for Sears Holdings Corporation, we use net sales instead of net credit sales. This is because most companies don't report the level of detail needed to determine net credit sales.

Days' Sales in Receivables

After making a credit sale, the next step is to collect the receivable. **Days' sales in receivables**, also called the *collection period*, indicates how many days it takes to collect the average level of accounts receivable. The number of days' sales in receivables should be close to the number of days customers are allowed to make payment when credit is extended. The shorter the collection period, the more quickly the organization can use its cash. The longer the collection period, the less cash is available for operations. Sears Holdings Corporation's days' sales in receivables can be computed as follows:

Days' Sales in Receivables
The ratio of average net accounts receivable to one day's sales. The ratio tells how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio.

Days' sales in receivables	= 365 days / Accounts receivable turnover ratio
	= 365 days / 59.31
	= 6 days (rounded)

On average, it takes Sears Holdings Corporation 6 days to collect its accounts receivable. However, this figure is somewhat misleading. We used net sales rather than net credit sales when calculating the accounts receivable turnover. Therefore, our calculation includes both cash and credit sales.

The length of the collection period depends on the credit terms of the sale. For example, sales on net 30 terms should be collected within approximately 30 days. When there is a discount, such as 2/10, net 30, the collection period may be shorter than 30 days. Credit terms of net 45 result in a longer collection period than 30 days.

Try It!

Lovett Company reported the following selected items at March 31, 2018 (last year's—2017—amounts also given as needed):

Accounts Payable	$ 128,000	Accounts Receivable, net:	
Cash	104,000	March 31, 2018	$ 108,000
Merchandise Inventory:		March 31, 2017	68,000
March 31, 2018	116,000	Cost of Goods Sold	460,000
March 31, 2017	80,000	Short-term Investments	56,000
Net Credit Sales Revenue	1,168,000	Other Current Assets	48,000
Long-term Assets	168,000	Other Current Liabilities	72,000
Long-term Liabilities	52,000		

14. Compute Lovett's (a) acid-test ratio, (b) accounts receivable turnover ratio, and (c) days' sales in receivables as of March 31, 2018.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S8-13. MyAccountingLab

REVIEW

> Things You Should Know

1. What are common types of receivables, and how are credit sales recorded?

- A receivable is a monetary claim against a business or an individual.
- There are three major types of receivables:
  - Accounts receivable—Represent the right to receive cash in the future from customers for goods sold or for services performed.
  - Notes receivable—Represent a written promise that the customer will pay a fixed amount of principal plus interest by a certain date in the future.
  - Other receivables—A miscellaneous category that includes any other type of receivables where there is a right to receive cash in the future.
- A critical component of internal control over receivables is the separation of cash-handling and cash-accounting duties.
- A separate accounts receivable account (called a subsidiary account) must be maintained for each customer in order to account for payments received from the customer and amounts still owed.
- The sum of all balances in the subsidiary accounts receivable will equal a control account balance, Accounts Receivable.
- As a way to receive cash quicker and reduce risk of uncollectibles, businesses can accept credit cards and debit cards and/or factor or pledge their receivables.

2. How are uncollectibles accounted for when using the direct write-off method?

- Writing off uncollectible accounts when using the direct write-off method involves a debit to Bad Debts Expense and a credit to Accounts Receivable.
- Recovery of accounts previously written off is recorded by reversing the write-off entry and then recording an entry to receive the cash.
- The direct write-off method violates the matching principle and is not the method required by GAAP.

3. How are uncollectibles accounted for when using the allowance method?

- When using the allowance method, companies estimate bad debts expense at the end of the period and record an adjusting entry that debits Bad Debts Expense and credits Allowance for Bad Debts. There are three ways to estimate bad debts expense:
  - Percent-of-sales method (income statement approach)—Computes bad debts expense as a percentage of net credit sales.
  - Percent-of-receivables method (balance sheet approach)—Determines the balance of the Allowance for Bad Debts account based on a percentage of accounts receivable.
  - Aging-of-receivables method (balance sheet approach)—Determines the balance of the Allowance for Bad Debts account based on the age of individual accounts receivable.
- Writing off uncollectible accounts involves a debit to Allowance for Bad Debts and a credit to Accounts Receivable.
- Recovery of accounts previously written off is recorded by reversing the write-off entry and then recording an entry to receive the cash.
- The allowance method follows the matching principle and is required by GAAP.

4. How are notes receivable accounted for?

- Notes receivable involve interest that is computed as principal times interest rate times time.
- Interest on notes must be accrued at the end of each period, and an adjusting entry must be recorded by debiting Interest Receivable and crediting Interest Revenue.
- The receipt of cash at a note's maturity includes the principal plus interest.
- When a customer dishonors a note, the business can transfer the note receivable (plus interest earned) to an accounts receivable.

5. How do we use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance?

- The acid-test ratio reveals whether an entity could pay all its current liabilities if they were due immediately. (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities.
- Accounts receivable turnover ratio measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable.
- The days' sales in receivables indicates how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio.

> Check Your Understanding 8-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Monarch Map Company's balance sheet at December 31, 2017, reported the following:

Accounts Receivable	$ 60,000
Less: Allowance for bad debts	2,000

Requirements

1. How much of the receivables did Monarch expect to collect? Stated differently, what was the net realizable value of these receivables? (See Learning Objective 3)
2. Journalize, without explanations, 2018 entries for Monarch and post to the Accounts Receivable and Allowance for Bad Debts T-accounts. (See Learning Objectives 1, 3)
   a. Total credit sales for 2018 were $80,000 (ignore Cost of Goods Sold).
   b. Monarch received cash payments on account during 2018 of $74,300.
   c. Accounts receivable identified to be uncollectible totaled $2,700.
3. Record the adjusting entry to recognize bad debts expense using the following independent situations, and then post to the Bad Debts Expense and Allowance for Bad Debts T-accounts. (See Learning Objective 3)
   a. 3% of credit sales were estimated to be uncollectible.
   b. An aging of receivables indicates that $2,200 of the receivables are estimated to be uncollectible.

> Solution

Requirement 1

Net realizable value of receivables = $60,000 − $2,000 = $58,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
(a)	Accounts Receivable	80,000	
	Sales Revenue		80,000
(b)	Cash	74,300	
	Accounts Receivable		74,300
(c)	Allowance for Bad Debts	2,700	
	Accounts Receivable		2,700

Accounts Receivable

	Debit	Credit	
Jan. 1, 2018, Bal.	60,000		
(a)	80,000	74,300	(b)
		2,700	(c)
Unadj. Bal.	63,000		

Allowance for Bad Debts

	Debit	Credit	
		2,000	Jan. 1, 2018, Bal.
(c)	2,700		
Unadj. Bal.	700		

Requirement 3a

Bad debts expense = Net credit sales × % = $80,000 × 0.03 = $2,400

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	2,400	
	Allowance for Bad Debts		2,400

Allowance for Bad Debts

	Debit	Credit	
		2,000	Jan. 1, 2018, Bal.
(c)	2,700		
Unadj. Bal.	700		
		2,400	Adj.
		1,700	**Dec. 31, 2018, Bal.**

Bad Debts Expense

	Debit	Credit
Adj.	2,400	
Dec. 31, 2018, Bal.	**2,400**	

Requirement 3b

Bad debts expense = Target balance + Unadj. debit balance = $2,200 + $700
= $2,900

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	2,900	
	Allowance for Bad Debts		2,900

Allowance for Bad Debts

	Debit	Credit	
		2,000	Jan. 1, 2018, Bal.
(c)	2,700		
Unadj. Bal.	700		
		2,900	Adj.
		2,200	**Dec. 31, 2018, Bal.**

Bad Debts Expense

	Debit	Credit
Adj.	2,900	
Dec. 31, 2018, Bal.	**2,900**	

> Check Your Understanding 8-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Suppose First Fidelity Bank engaged in the following transactions:

2018	
Apr. 1	Loaned $8,000 to Bland, Co. Received a six-month, 10% note.
Oct. 1	Collected the Bland note at maturity.
Dec. 1	Loaned $6,000 to Flores, Inc. on a 180-day, 12% note.
31	Accrued interest revenue on the Flores note.
2019	
May 30	Collected the Flores note at maturity.

Journalize the 2018 and 2019 transactions on First Fidelity's books. Explanations are not needed. Use a 365-day year to compute interest. Round interest calculations to the nearest dollar. First Fidelity's accounting period ends on December 31. (See Learning Objective 4)

> Solution

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 1	Notes Receivable—Bland, Co.	8,000	
	Cash		8,000
Oct. 1	Cash ($8,000 + $400)	8,400	
	Notes Receivable—Bland, Co.		8,000
	Interest Revenue ($8,000 × 0.10 × 6/12)		400
Dec. 1	Notes Receivable—Flores, Inc.	6,000	
	Cash		6,000
Dec. 31	Interest Receivable	59	
	Interest Revenue ($6,000 × 0.12 × 30/365)		59
2019			
May 30	Cash ($6,000 + ($6,000 × 0.12 × 180/365))	6,355	
	Notes Receivable—Flores, Inc.		6,000
	Interest Receivable		59
	Interest Revenue ($6,000 × 0.12 × 150/365)		296

> Key Terms

Accounts Receivable (p. 433)
Accounts Receivable Turnover Ratio (p. 457)
Acid-Test Ratio (p. 456)
Aging-of-Receivables Method (p. 446)
Allowance for Bad Debts (p. 439)
Allowance Method (p. 439)
Bad Debts Expense (p. 437)
Days' Sales in Receivables (p. 457)
Debtor (p. 433)
Direct Write-off Method (p. 437)
Dishonor a Note (p. 454)
Interest (p. 449)
Interest Period (p. 450)
Interest Rate (p. 450)
Maturity Date (p. 433)
Maturity Value (p. 450)
Net Realizable Value (p. 439)
Notes Receivable (p. 433)
Percent-of-Receivables Method (p. 443)
Percent-of-Sales Method (p. 442)
Principal (p. 449)
Receivable (p. 433)

> Quick Check

Learning Objective 1

1. With good internal controls, the person who handles cash can also
   a. account for cash payments.
   b. account for cash receipts from customers.
   c. issue credits to customers for sales returns.
   d. None of the above

Learning Objective 2

2. Which of the following is a limitation of the direct write-off method of accounting for uncollectibles?
   a. The direct write-off method overstates assets on the balance sheet.
   b. The direct write-off method does not match expenses against revenue very well.
   c. The direct write-off method does not set up an allowance for uncollectibles.
   d. All of the above

Learning Objective 2

3. The entry to record a write-off of an uncollectible account when using the direct write-off method involves a
   a. debit to Allowance for Bad Debts.
   b. credit to Cash.
   c. debit to Accounts Receivable.
   d. debit to Bad Debts Expense.

Learning Objective 3

4. Brickman Corporation uses the allowance method to account for uncollectible receivables. At the beginning of the year, Allowance for Bad Debts had a credit balance of $1,000. During the year Brickman wrote off uncollectible receivables of $2,100. Brickman recorded Bad Debts Expense of $2,700. What is Brickman's year-end balance in Allowance for Bad Debts?
   a. $1,600 **b.** $4,800 **c.** $3,700 **d.** $600

Learning Objective 3

5. Brickman's ending balance of Accounts Receivable is $19,500. Use the data in the preceding question to compute the net realizable value of Accounts Receivable at year-end.
   a. $16,800 **b.** $19,500 **c.** $17,400 **d.** $17,900

Learning Objective 3

6. During the year, Bernard Company had net credit sales of $45,000. At the end of the year, before adjusting entries, the balance in Accounts Receivable was $12,500 (debit) and the balance in Allowance for Bad Debts was $650 (credit). If the company uses an income statement approach to estimate bad debts at 5%, what is the ending balance in the Allowance for Bad Debts account?

   a. $1,275 **b.** $1,600 **c.** $2,250 **d.** $2,900

Learning Objective 4

7. At December 31 year-end, Crain Corporation has an $8,400 note receivable from a customer. Interest of 10% has accrued for 10 months on the note. What will Crain's financial statements report for this situation at December 31?

   a. The balance sheet will report the note receivable of $8,400.
   b. The balance sheet will report the note receivable of $8,400 and interest receivable of $700.
   c. Nothing because the business has not received the cash yet.
   d. The income statement will report a note receivable of $8,400.

Learning Objective 4

8. Using the data in the preceding question, what will the income statement for the year ended December 31 report for this situation?

   a. Nothing because the business has not received the cash yet
   b. Note receivable of $8,400
   c. Interest revenue of $700
   d. Both b and c

Learning Objective 5

9. At year-end, Schultz, Inc. has cash of $11,600, current accounts receivable of $48,900, merchandise inventory of $37,900, and prepaid expenses totaling $5,100. Liabilities of $55,900 must be paid next year. What is Schultz's acid-test ratio?

   a. 1.08
   b. 0.21
   c. 1.76
   d. Cannot be determined from the data given

Learning Objective 5

10. Using the data in the preceding question, assume accounts receivable had a beginning balance of $67,400 and net credit sales for the current year totaled $807,800. How many days did it take Schultz to collect its average level of receivables?

   a. 49 **b.** 35 **c.** 29 **d.** 26

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is the difference between accounts receivable and notes receivable?
2. List some common examples of other receivables, besides accounts receivable and notes receivable.
3. What is a critical element of internal control in the handling of receivables by a business? Explain how this element is accomplished.
4. When dealing with receivables, give an example of a subsidiary account.
5. What type of account must the sum of all subsidiary accounts be equal to?
6. What are some benefits to a business in accepting credit cards and debit cards?
7. What occurs when a business factors its receivables?
8. What occurs when a business pledges its receivables?
9. What is the expense account associated with the cost of uncollectible receivables called?
10. When is bad debts expense recorded when using the direct write-off method?
11. What are some limitations of using the direct write-off method?
12. When is bad debts expense recorded when using the allowance method?
13. When using the allowance method, how are accounts receivable shown on the balance sheet?
14. When using the allowance method, what account is debited when writing off uncollectible accounts? How does this differ from the direct write-off method?
15. When a receivable is written off under the allowance method, how does it affect the net realizable value shown on the balance sheet?
16. How does the percent-of-sales method compute bad debts expense?
17. How do the percent-of-receivables and aging-of-receivables methods compute bad debts expense?
18. What is the difference between the percent-of-receivables and aging-of-receivables methods?
19. In accounting for bad debts, how do the income statement approach and the balance sheet approach differ?
20. What is the formula to compute interest on a note receivable?
21. Why must companies record accrued interest revenue at the end of the accounting period?
22. How is the acid-test ratio calculated, and what does it signify?
23. What does the accounts receivable turnover ratio measure, and how is it calculated?
24. What does the days' sales in receivables indicate, and how is it calculated?

> Short Exercises

Learning Objective 1

S8-1 Ensuring internal control over the collection of receivables

Consider internal control over receivables collections. What job must be withheld from a company's credit department in order to safeguard its cash? If the credit department does perform this job, what can a credit department employee do to hurt the company?

Learning Objective 1

S8-2 Recording credit sales and collections

Record the following transactions for Summer Consulting. Explanations are not required.

Apr. 15	Provided consulting services to Bob Jones and billed the customer $1,500.
18	Provided consulting services to Samantha Cruise and billed the customer $865.
25	Received $750 cash from Jones.
28	Provided consulting services to Regan Taylor and billed the customer $625.
28	Received $865 cash from Cruise.
30	Received $1,375 cash, $750 from Jones and $625 from Taylor.

Learning Objective 2

S8-3 Applying the direct write-off method to account for uncollectibles

Shawna Valley is an attorney in Los Angeles. Valley uses the direct write-off method to account for uncollectible receivables.

At April 30, 2018, Valley's accounts receivable totaled $19,000. During May, she earned revenue of $22,000 on account and collected $15,000 on account. She also wrote off uncollectible receivables of $1,100 on May 31, 2018.

Requirements

1. Use the direct write-off method to journalize Valley's write-off of the uncollectible receivables.
2. What is Valley's balance of Accounts Receivable at May 31, 2018?

Learning Objective 2

S8-4 Collecting a receivable previously written off—direct write-off method

Spring Garden Greenhouse had trouble collecting its account receivable from Steve Stone. On June 19, 2018, Spring Garden Greenhouse finally wrote off Stone's $600 account receivable. On December 31, Stone sent a $600 check to Spring Garden Greenhouse.

Journalize the entries required for Spring Garden Greenhouse, assuming Spring Garden Greenhouse uses the direct write-off method.

Learning Objective 3

S8-5 Applying the allowance method to account for uncollectibles

The Accounts Receivable balance and Allowance for Bad Debts for Signature Lamp Company at December 31, 2017, was $10,800 and $2,000 (credit balance), respectively. During 2018, Signature Lamp Company completed the following transactions:

a. Sales revenue on account, $273,400 (ignore Cost of Goods Sold).

b. Collections on account, $223,000.

c. Write-offs of uncollectibles, $5,900.

d. Bad debts expense of $5,200 was recorded.

Requirements

1. Journalize Signature Lamp Company's transactions for 2018 assuming Signature Lamp Company uses the allowance method.
2. Post the transactions to the Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense T-accounts, and determine the ending balance of each account.
3. Show how accounts receivable would be reported on the balance sheet at December 31, 2018.

S8-6 Applying the allowance method (percent-of-sales) to account for uncollectibles

Learning Objective 3

During its first year of operations, Fall Wine Tour earned net credit sales of $311,000. Industry experience suggests that bad debts will amount to 3% of net credit sales. At December 31, 2018, accounts receivable total $44,000. The company uses the allowance method to account for uncollectibles.

Requirements

1. Journalize Fall Wine Tour's Bad Debts Expense using the percent-of-sales method.
2. Show how to report accounts receivable on the balance sheet at December 31, 2018.

S8-7 Applying the allowance method (percent-of-receivables) to account for uncollectibles

Learning Objective 3

The Accounts Receivable balance for Lake, Inc. at December 31, 2017, was $20,000. During 2018, Lake earned revenue of $454,000 on account and collected $325,000 on account. Lake wrote off $5,600 receivables as uncollectible. Industry experience suggests that uncollectible accounts will amount to 5% of accounts receivable.

Requirements

1. Assume Lake had an unadjusted $2,700 credit balance in Allowance for Bad Debts at December 31, 2018. Journalize Lake's December 31, 2018, adjustment to record bad debts expense using the percent-of-receivables method.
2. Assume Lake had an unadjusted $2,400 debit balance in Allowance for Bad Debts at December 31, 2018. Journalize Lake's December 31, 2018, adjustment to record bad debts expense using the percent-of-receivables method.

S8-8 Applying the allowance method (aging-of-receivables) to account for uncollectibles

Learning Objective 3

Surf and Sun had the following balances at December 31, 2018, before the year-end adjustments:

Accounts Receivable	
81,000	

Allowance for Bad Debts	
	2,063

The aging of accounts receivable yields the following data:

	Age of Accounts Receivable		
	0–60 Days	Over 60 Days	Total Receivables
Accounts Receivable	$ 78,000	$ 3,000	$ 81,000
Estimated percent uncollectible	× 2%	× 23%	

Requirements

1. Journalize Surf and Sun's entry to record bad debts expense for 2018 using the aging-of-receivables method.
2. Prepare a T-account to compute the ending balance of Allowance for Bad Debts.

Learning Objective 4

S8-9 Computing interest amounts on notes receivable

A table of notes receivable for 2018 follows:

	Principal	Interest Rate	Interest Period During 2018
Note 1	$ 30,000	6%	6 months
Note 2	12,000	10%	270 days
Note 3	14,000	14%	75 days
Note 4	100,000	7%	10 months

For each of the notes receivable, compute the amount of interest revenue earned during 2018. Round to the nearest dollar.

Learning Objective 4

S8-10 Accounting for a note receivable

On June 6, Lakeland Bank & Trust lent $80,000 to Stephan Stow on a 30-day, 9% note.

Requirements

1. Journalize for Lakeland the lending of the money on June 6.
2. Journalize the collection of the principal and interest at maturity. Specify the date. Round to the nearest dollar.

Learning Objective 4

S8-11 Accruing interest revenue and recording collection of a note

On December 1, Kyle Corporation accepted a 60-day, 9%, $12,000 note receivable from J. Michael in exchange for his account receivable.

Requirements

1. Journalize the transaction on December 1.
2. Journalize the adjusting entry needed on December 31 to accrue interest revenue. Round to the nearest dollar.
3. Journalize the collection of the principal and interest at maturity. Specify the date. Round to the nearest dollar.

Learning Objective 4

S8-12 Recording a dishonored note receivable

McKale Corporation has a three-month, $18,000, 9% note receivable from L. Peters that was signed on June 1, 2018. Peters defaults on the loan on September 1.

Journalize the entry for McKale to record the default of the loan.

Learning Objective 5

S8-13 Using the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate a company

Silver Clothiers reported the following selected items at April 30, 2018 (last year's—2017—amounts also given as needed):

Accounts Payable	$ 328,000	Accounts Receivable, net:	
Cash	573,720	April 30, 2018	$ 11,000
Merchandise Inventory:		April 30, 2017	165,000
April 30, 2018	250,000	Cost of Goods Sold	1,200,000
April 30, 2017	210,000	Short-term Investments	148,000
Net Credit Sales Revenue	3,212,000	Other Current Assets	100,000
Long-term Assets	350,000	Other Current Liabilities	188,000
Long-term Liabilities	130,000		

Compute Silver's (a) acid-test ratio, (b) accounts receivable turnover ratio, and (c) days' sales in receivables for the year ending April 30, 2018. Evaluate each ratio value as strong or weak. Silver sells on terms of net 30. (Round days' sales in receivables to a whole number.)

> Exercises

Learning Objective 1

E8-14 Defining common receivables terms

Match the terms with their correct definition.

Terms	Definitions
1. Accounts receivable	**a.** The party to a credit transaction who takes on an obligation/payable.
2. Other receivables	**b.** The party who receives a receivable and will collect cash in the future.
3. Debtor	**c.** A written promise to pay a specified amount of money at a particular future date.
4. Notes receivable	**d.** The date when the note receivable is due.
5. Maturity date	**e.** A miscellaneous category that includes any other type of receivable where there is a right to receive cash in the future.
6. Creditor	**f.** The right to receive cash in the future from customers for goods sold or for services performed.

Learning Objective 1

E8-15 Identifying and correcting internal control weakness

Suppose The Right Rig Dealership is opening a regional office in Omaha. Cary Regal, the office manager, is designing the internal control system. Regal proposes the following procedures for credit checks on new customers, sales on account, cash collections, and write-offs of uncollectible receivables:

- The credit department runs a credit check on all customers who apply for credit. When an account proves uncollectible, the credit department authorizes the write-off of the accounts receivable.
- Cash receipts come into the credit department, which separates the cash received from the customer remittance slips. The credit department lists all cash receipts by customer name and amount of cash received.
- The cash goes to the treasurer for deposit in the bank. The remittance slips go to the accounting department for posting to customer accounts.
- The controller compares the daily deposit slip to the total amount posted to customer accounts. Both amounts must agree.

Recall the components of internal control. Identify the internal control weakness in this situation, and propose a way to correct it.

Learning Objective 1

3. $695

E8-16 Recording credit sales and collections

Steller Corporation had the following transactions in June:

Jun. 1	Sold merchandise inventory on account to Carter Company, $1,575.
6	Sold merchandise inventory for cash, $550.
12	Received cash from Carter Company in full settlement of its accounts receivable.
20	Sold merchandise inventory on account to Iris Company, $765.
22	Sold merchandise inventory on account to Driver Company, $230.
28	Received cash from Iris Company in partial settlement of its accounts receivable, $300.

Requirements

1. Journalize the transactions. Ignore Cost of Goods Sold. Omit explanations.
2. Post the transactions to the general ledger and the accounts receivable subsidiary ledger. Assume all beginning balances are $0.
3. Verify the ending balance in the control Accounts Receivable equals the sum of the balances in the subsidiary ledger.

Learning Objectives 1, 2

E8-17 Journalizing transactions using the direct write-off method

On June 1, 2018, Best Performance Cell Phones sold $21,000 of merchandise to Anthony Trucking Company on account. Anthony fell on hard times and on July 15 paid only $5,000 of the account receivable. After repeated attempts to collect, Best Performance finally wrote off its accounts receivable from Anthony on September 5. Six months later, March 5, 2019, Best Performance received Anthony's check for $16,000 with a note apologizing for the late payment.

Requirements

1. Journalize the transactions for Best Performance Cell Phones using the direct write-off method. Ignore Cost of Goods Sold.
2. What are some limitations that Best Performance will encounter when using the direct write-off method?

Use the following information to answer Exercises E8-18 and E8-19.

At January 1, 2018, Hilltop Flagpoles had Accounts Receivable of $28,000, and Allowance for Bad Debts had a credit balance of $3,000. During the year, Hilltop Flagpoles recorded the following:

a. Sales of $185,000 ($164,000 on account; $21,000 for cash). Ignore Cost of Goods Sold.

b. Collections on account, $135,000.

c. Write-offs of uncollectible receivables, $2,300.

E8-18 Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Learning Objectives 1, 3

2. AR, Dec. 31 $54,700

Requirements

1. Journalize Hilltop's transactions that occurred during 2018. The company uses the allowance method.
2. Post Hilltop's transactions to the Accounts Receivable and Allowance for Bad Debts T-accounts.
3. Journalize Hilltop's adjustment to record bad debts expense assuming Hilltop estimates bad debts as 3% of credit sales. Post the adjustment to the appropriate T-accounts.
4. Show how Hilltop Flagpoles will report net accounts receivable on its December 31, 2018, balance sheet.

E8-19 Accounting for uncollectible accounts using the allowance method (percent-of-receivables) and reporting receivables on the balance sheet

Learning Objectives 1, 3

3. Bad Debts Expense $4,770

Requirements

1. Journalize Hilltop's transactions that occurred during 2018. The company uses the allowance method.
2. Post Hilltop's transactions to the Accounts Receivable and Allowance for Bad Debts T-accounts.
3. Journalize Hilltop's adjustment to record bad debts expense assuming Hilltop estimates bad debts as 10% of accounts receivable. Post the adjustment to the appropriate T-accounts.
4. Show how Hilltop Flagpoles will report net accounts receivable on its December 31, 2018, balance sheet.

E8-20 Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

Learning Objective 3

2. Allowance CR Bal. $25,360

At December 31, 2018, the Accounts Receivable balance of GPS Technology is $200,000. The Allowance for Bad Debts account has a $24,110 debit balance. GPS Technology prepares the following aging schedule for its accounts receivable:

	Age of Accounts			
	1–30 Days	**31–60 Days**	**61–90 Days**	**Over 90 Days**
Accounts Receivable	$ 65,000	$ 50,000	$ 40,000	$ 45,000
Estimated percent uncollectible	0.4%	3.0%	5.0%	48.0%

Requirements

1. Journalize the year-end adjusting entry for bad debts on the basis of the aging schedule. Show the T-account for the Allowance for Bad Debts at December 31, 2018.
2. Show how GPS Technology will report its net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 2, 3

E8-21 Journalizing transactions using the direct write-off method versus the allowance method

During August 2018, Lima Company recorded the following:

- Sales of $133,300 ($122,000 on account; $11,300 for cash). Ignore Cost of Goods Sold.
- Collections on account, $106,400.
- Write-offs of uncollectible receivables, $990.
- Recovery of receivable previously written off, $800.

Requirements

1. Journalize Lima's transactions during August 2018, assuming Lima uses the direct write-off method.
2. Journalize Lima's transactions during August 2018, assuming Lima uses the allowance method.

Learning Objectives 1, 4

E8-22 Journalizing credit sales, note receivable transactions, and accruing interest

Endurance Running Shoes reports the following:

2018	
May 6	Recorded credit sales of $102,000. Ignore Cost of Goods Sold.
Jul. 1	Loaned $18,000 to Jerry Paul, an executive with the company, on a one-year, 7% note.
Dec. 31	Accrued interest revenue on the Paul note.
2019	
Jul. 1	Collected the maturity value of the Paul note.

Journalize all entries required for Endurance Running Shoes.

Learning Objective 4

E8-23 Journalizing note receivable transactions including a dishonored note

On September 30, 2018, Team Bank loaned $94,000 to Kendall Warner on a one-year, 6% note. Team's fiscal year ends on December 31.

Requirements

1. Journalize all entries for Team Bank related to the note for 2018 and 2019.
2. Which party has a
   a. note receivable?
   b. note payable?
   c. interest revenue?
   d. interest expense?
3. Suppose that Kendall Warner defaulted on the note. What entry would Team record for the dishonored note?

E8-24 Journalizing note receivable transactions

Learning Objective 4

Jul. 1, 2019 Cash DR $17,280

The following selected transactions occurred during 2018 and 2019 for Baltic Importers. The company ends its accounting year on September 30.

2018	
Jul. 1	Loaned $16,000 cash to Bud Shyne on a one-year, 8% note.
Sep. 6	Sold goods to Lawn Pro, receiving a 90-day, 6% note for $11,000. Ignore Cost of Goods Sold.
30	Made a single entry to accrue interest revenue on both notes.
?	Collected the maturity value of the Lawn Pro note.
2019	
Jul. 1	Collected the maturity value of the Shyne note.

Journalize all required entries. Make sure to determine the missing maturity date. Round to the nearest dollar.

E8-25 Journalizing note receivable transactions

Learning Objective 4

Oct. 31 Cash DR $18,355

Professional Steam Cleaning performs services on account. When a customer account becomes four months old, Professional converts the account to a note receivable. During 2018, the company completed the following transactions:

Apr. 28	Performed service on account for Parkview Club, $18,000.
Sep. 1	Received an $18,000, 60-day, 12% note from Parkview Club in satisfaction of its past-due account receivable.
Oct. 31	Collected the Parkview Club note at maturity.

Record the transactions in Professional's journal. Round to the nearest dollar.

Learning Objective 5

E8-26 Evaluating ratio data

Abanaki Carpets reported the following amounts in its 2018 financial statements. The 2017 figures are given for comparison.

	2018		2017	
Balance sheet—partial				
Current Assets:				
Cash		$ 5,000		$ 11,000
Short-term Investments		25,000		14,000
Accounts Receivable	$ 64,000		$ 77,000	
Less: Allowance for Bad Debts	(7,000)	57,000	(6,000)	71,000
Merchandise Inventory		194,000		190,000
Prepaid Insurance		2,000		2,000
Total Current Assets		283,000		288,000
Total Current Liabilities		105,000		107,000
Income statement—partial				
Net Sales (all on account)		742,400		730,000

Requirements

1. Calculate Abanaki's acid-test ratio for 2018. (Round to two decimals.) Determine whether Abanaki's acid-test ratio improved or deteriorated from 2017 to 2018. How does Abanaki's acid-test ratio compare with the industry average of 0.80?
2. Calculate Abanaki's accounts receivable turnover ratio. (Round to two decimals.) How does Abanaki's ratio compare to the industry average accounts receivable turnover of 10?
3. Calculate the days' sales in receivables for 2018. (Round to the nearest day.) How do the results compare with Abanaki's credit terms of net 30?

Learning Objective 5

E8-27 Computing the collection period for receivables

Unique Media Sign Incorporated sells on account. Recently, Unique reported the following figures:

	2018	2017
Net Credit Sales	$ 594,920	$ 602,000
Net Receivables at end of year	38,500	47,100

Requirements

1. Compute Unique's days' sales in receivables for 2018. (Round to the nearest day.)
2. Suppose Unique's normal credit terms for a sale on account are 2/10, net 30. How well does Unique's collection period compare to the company's credit terms? Is this good or bad for Unique?

> Problems Group A

P8-28A Accounting for uncollectible accounts using the allowance (percent-of-sales) and direct write-off methods and reporting receivables on the balance sheet

Learning Objectives 1, 2, 3

1. Bad Debts Expense $11,000

On August 31, 2018, Bouquet Floral Supply had a $140,000 debit balance in Accounts Receivable and a $5,600 credit balance in Allowance for Bad Debts. During September, Bouquet made:

- Sales on account, $550,000. Ignore Cost of Goods Sold.
- Collections on account, $584,000.
- Write-offs of uncollectible receivables, $4,000.

Requirements

1. Journalize all September entries using the *allowance* method. Bad debts expense was estimated at 2% of credit sales. Show all September activity in Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense (post to these T-accounts).
2. Using the same facts, assume that Bouquet used the direct write-off method to account for uncollectible receivables. Journalize all September entries using the *direct write-off* method. Post to Accounts Receivable and Bad Debts Expense, and show their balances at September 30, 2018.
3. What amount of Bad Debts Expense would Bouquet report on its September income statement under each of the two methods? Which amount better matches expense with revenue? Give your reason.
4. What amount of *net* accounts receivable would Bouquet report on its September 30, 2018, balance sheet under each of the two methods? Which amount is more realistic? Give your reason.

P8-29A Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

Learning Objectives 1, 3

2. Allowance CR Bal. $8,482 at Dec. 31, 2018

At September 30, 2018, the accounts of Green Terrace Medical Center (GTMC) include the following:

Accounts Receivable	$ 145,000
Allowance for Bad Debts (credit balance)	3,500

During the last quarter of 2018, GTMC completed the following selected transactions:

- Sales on account, $450,000. Ignore Cost of Goods Sold.
- Collections on account, $427,100
- Wrote off accounts receivable as uncollectible: Regan, Co., $1,400; Owen Reis, $800; and Patterson, Inc., $700
- Recorded bad debts expense based on the aging of accounts receivable, as follows:

	Age of Accounts			
	1–30 Days	31–60 Days	61–90 Days	Over 90 Days
Accounts Receivable	$ 104,000	$ 39,000	$ 14,000	$ 8,000
Estimated percent uncollectible	0.3%	3%	30%	35%

Requirements

1. Open T-accounts for Accounts Receivable and Allowance for Bad Debts. Journalize the transactions (omit explanations) and post to the two accounts.
2. Show how Green Terrace Medical Center should report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

2. Net AR $119,800

P8-30A Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Delta Watches completed the following selected transactions during 2018 and 2019:

2018	
Dec. 31	Estimated that bad debts expense for the year was 2% of credit sales of $450,000 and recorded that amount as expense. The company uses the allowance method.
31	Made the closing entry for bad debts expense.
2019	
Jan. 17	Sold merchandise inventory to Mack Smith, $400, on account. Ignore Cost of Goods Sold.
Jun. 29	Wrote off Mack Smith's account as uncollectible after repeated efforts to collect from him.
Aug. 6	Received $400 from Mack Smith, along with a letter apologizing for being so late. Reinstated Smith's account in full and recorded the cash receipt.
Dec. 31	Made a compound entry to write off the following accounts as uncollectible: Cam Carter, $1,400; Mike Venture, $1,200; and Russell Reeves, $400.
31	Estimated that bad debts expense for the year was 2% on credit sales of $510,000 and recorded the expense.
31	Made the closing entry for bad debts expense.

Requirements

1. Open T-accounts for Allowance for Bad Debts and Bad Debts Expense, assuming the accounts begin with a zero balance. Record the transactions in the general journal (omit explanations), and post to the two T-accounts.
2. Assume the December 31, 2019, balance of Accounts Receivable is $136,000. Show how net accounts receivable would be reported on the balance sheet at that date.

Learning Objectives 1, 3, 4

Dec. 31, 2018 Interest Receivable $1,640

P8-31A Accounting for uncollectible accounts (aging-of-receivables method), notes receivable, and accrued interest revenue

Sleepy Recliner Chairs completed the following selected transactions:

2018	
Jul. 1	Sold merchandise inventory to Stan-Mart, receiving a $41,000, nine-month, 8% note. Ignore Cost of Goods Sold.
Oct. 31	Recorded cash sales for the period of $24,000. Ignore Cost of Goods Sold.
Dec. 31	Made an adjusting entry to accrue interest on the Stan-Mart note.
31	Made an adjusting entry to record bad debts expense based on an aging of accounts receivable. The aging schedule shows that $13,800 of accounts receivable will not be collected. Prior to this adjustment, the credit balance in Allowance for Bad Debts is $11,800.
2019	
Apr. 1	Collected the maturity value of the Stan-Mart note.
Jun. 23	Sold merchandise inventory to Appeal, Corp., receiving a 60-day, 6% note for $7,000. Ignore Cost of Goods Sold.
Aug. 22	Appeal, Corp. dishonored its note at maturity; the business converted the maturity value of the note to an account receivable.
Nov. 16	Loaned $17,000 cash to Crosby, Inc., receiving a 90-day, 16% note.
Dec. 5	Collected in full on account from Appeal, Corp.
31	Accrued the interest on the Crosby, Inc. note.

Record the transactions in the journal of Sleepy Recliner Chairs. Explanations are not required. (Round to the nearest dollar.)

Learning Objective 4

1. Note 3 Dec. 18, 2018

P8-32A Accounting for notes receivable and accruing interest

Carley Realty loaned money and received the following notes during 2018.

Note	Date	Principal Amount	Interest Rate	Term
(1)	Apr. 1	$ 6,000	7%	1 year
(2)	Sep. 30	12,000	6%	6 months
(3)	Sep. 19	18,000	8%	90 days

Requirements

1. Determine the maturity date and maturity value of each note.
2. Journalize the entries to establish each Note Receivable and to record collection of principal and interest at maturity. Include a single adjusting entry on December 31, 2018, the fiscal year-end, to record accrued interest revenue on any applicable note. Explanations are not required. Round to the nearest dollar.

Learning Objective 4

Dec. 31, 2018 Income Summary CR $74

P8-33A Accounting for notes receivable, dishonored notes, and accrued interest revenue

Consider the following transactions for CC Publishing.

2018	
Dec. 6	Received a $18,000, 90-day, 6% note in settlement of an overdue accounts receivable from Go Go Publishing.
31	Made an adjusting entry to accrue interest on the Go Go Publishing note.
31	Made a closing entry for interest revenue.
2019	
Mar. 6	Collected the maturity value of the Go Go Publishing note.
Jun. 30	Loaned $11,000 cash to Lincoln Music, receiving a six-month, 20% note.
Oct. 2	Received a $2,400, 60-day, 20% note for a sale to Tusk Music. Ignore Cost of Goods Sold.
Dec. 1	Tusk Music dishonored its note at maturity.
1	Wrote off the receivable associated with Tusk Music. (Use the allowance method.)
30	Collected the maturity value of the Lincoln Music note.

Journalize all transactions for CC Publishing. Round all amounts to the nearest dollar.

Learning Objective 5

1. Acid-test ratio (2018) 0.88

P8-34A Using ratio data to evaluate a company's financial position

The comparative financial statements of Norfolk Cosmetic Supply for 2018, 2017, and 2016 include the data shown here:

	2018	2017	2016
Balance sheet—partial			
Current Assets:			
Cash	$ 70,000	$ 60,000	$ 50,000
Short-term investments	140,000	170,000	120,000
Accounts Receivable, Net	280,000	240,000	260,000
Merchandise Inventory	355,000	330,000	310,000
Prepaid Expenses	70,000	35,000	35,000
Total Current Assets	915,000	835,000	775,000
Total Current Liabilities	560,000	630,000	640,000
Income statement—partial			
Net Sales (all on account)	5,890,000	5,130,000	4,210,000

Requirements

1. Compute these ratios for 2018 and 2017:
   a. Acid-test ratio (Round to two decimals.)
   b. Accounts receivable turnover (Round to two decimals.)
   c. Days' sales in receivables (Round to the nearest whole day.)
2. Considering each ratio individually, which ratios improved from 2017 to 2018 and which ratios deteriorated? Is the trend favorable or unfavorable for the company?

> Problems Group B

P8-35B Accounting for uncollectible accounts using the allowance (percent-of-sales) and direct write-off methods and reporting receivables on the balance sheet

Learning Objectives 1, 2, 3

1. Sep. 30 Bal. Accounts Receivable $91,000

On August 31, 2018, Forget-Me-Not Floral Supply had a $140,000 debit balance in Accounts Receivable and a $5,600 credit balance in Allowance for Bad Debts. During September, Forget-Me-Not made the following transactions:

- Sales on account, $530,000. Ignore Cost of Goods Sold.
- Collections on account, $573,000.
- Write-offs of uncollectible receivables, $6,000.

Requirements

1. Journalize all September entries using the *allowance* method. Bad debts expense was estimated at 2% of credit sales. Show all September activity in Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense (post to these T-accounts).
2. Using the same facts, assume that Forget-Me-Not used the direct write-off method to account for uncollectible receivables. Journalize all September entries using the *direct write-off* method. Post to Accounts Receivable and Bad Debts Expense, and show their balances at September 30, 2018.
3. What amount of Bad Debts Expense would Forget-Me-Not report on its September income statement under each of the two methods? Which amount better matches expense with revenue? Give your reason.
4. What amount of *net* accounts receivable would Forget-Me-Not report on its September 30, 2018, balance sheet under each of the two methods? Which amount is more realistic? Give your reason.

P8-36B Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

Learning Objectives 1, 3

2. Dec. 31, 2018 Allowance CR Bal. $11,401

At September 30, 2018, the accounts of Spring Mountain Medical Center (SMMC) include the following:

Accounts Receivable	$145,000
Allowance for Bad Debts (credit balance)	3,400

During the last quarter of 2018, SMMC completed the following selected transactions:

- Sales on account, $475,000. Ignore Cost of Goods Sold.
- Collections on account, $451,800.
- Wrote off accounts receivable as uncollectible: Randall, Co., $1,800; Oliver Welch, $900; and Rain, Inc., $500
- Recorded bad debts expense based on the aging of accounts receivable, as follows:

	Age of Accounts			
	1–30 Days	31–60 Days	61–90 Days	Over 90 Days
Accounts Receivable	$ 97,000	$ 37,000	$ 17,000	$ 14,000
Estimated percent uncollectible	0.3%	3%	30%	35%

Requirements

1. Open T-accounts for Accounts Receivable and Allowance for Bad Debts. Journalize the transactions (omit explanations) and post to the two accounts.
2. Show how Spring Mountain Medical Center should report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

1. Dec. 31, 2018, Allowance CR Bal. $12,300

P8-37B Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Dialex Watches completed the following selected transactions during 2018 and 2019:

2018	
Dec. 31	Estimated that bad debts expense for the year was 3% of credit sales of $410,000 and recorded that amount as expense. The company uses the allowance method.
31	Made the closing entry for bad debts expense.
2019	
Jan. 17	Sold merchandise inventory to Marty White, $400, on account. Ignore Cost of Goods Sold.
Jun. 29	Wrote off Marty White's account as uncollectible after repeated efforts to collect from him.
Aug. 6	Received $400 from Marty White, along with a letter apologizing for being so late. Reinstated White's account in full and recorded the cash receipt.
Dec. 31	Made a compound entry to write off the following accounts as uncollectible: Barry Krisp, $1,600; Maria Bryant, $1,100; and Richard Renik, $400.
31	Estimated that bad debts expense for the year was 3% on credit sales of $490,000 and recorded the expense.
31	Made the closing entry for bad debts expense.

Requirements

1. Open T-accounts for Allowance for Bad Debts and Bad Debts Expense, assuming the accounts begin with a zero balance. Record the transactions in the general journal (omit explanations), and post to the two T-accounts.
2. Assume the December 31, 2019, balance of Accounts Receivable is $136,000. Show how net accounts receivable would be reported on the balance sheet at that date.

P8-38B Accounting for uncollectible accounts (aging-of-receivables method), notes receivable, and accrued interest revenue

Learning Objectives 1, 3, 4

Dec. 31, 2018 Bad Debts Expense $4,200

Relax Recliner Chairs completed the following selected transactions:

2018	
Jul. 1	Sold merchandise inventory to Go-Mart, receiving a $43,000, nine-month, 16% note. Ignore Cost of Goods Sold.
Oct. 31	Recorded cash sales for the period of $23,000. Ignore Cost of Goods Sold.
Dec. 31	Made an adjusting entry to accrue interest on the Go-Mart note.
31	Made an adjusting entry to record bad debts expense based on an aging of accounts receivable. The aging schedule shows that $14,900 of accounts receivable will not be collected. Prior to this adjustment, the credit balance in Allowance for Bad Debts is $10,700.
2019	
Apr. 1	Collected the maturity value of the Go-Mart note.
Jun. 23	Sold merchandise inventory to Allure, Corp., receiving a 60-day, 6% note for $7,000. Ignore Cost of Goods Sold.
Aug. 22	Allure, Corp. dishonored its note at maturity; the business converted the maturity value of the note to an account receivable.
Nov. 16	Loaned $20,000 cash to Tench, Inc., receiving a 90-day, 8% note.
Dec. 5	Collected in full on account from Allure, Corp.
31	Accrued the interest on the Tench, Inc. note.

Record the transactions in the journal of Relax Recliner Chairs. Explanations are not required. (Round to the nearest dollar.)

P8-39B Accounting for notes receivable and accruing interest

Learning Objective 4

1. Note 2 Maturity Value $20,430

Logan Realty loaned money and received the following notes during 2018.

Note	Date	Principal Amount	Interest Rate	Term
(1)	Oct. 1	$ 16,000	7%	1 year
(2)	Jun. 30	18,000	18%	9 months
(3)	Sep. 19	12,000	8%	90 days

Requirements

1. Determine the maturity date and maturity value of each note.
2. Journalize the entries to establish each Note Receivable and to record collection of principal and interest at maturity. Include a single adjusting entry on December 31, 2018, the fiscal year-end, to record accrued interest revenue on any applicable note. Explanations are not required. Round to the nearest dollar.

Learning Objective 4

March 6, 2019 Interest Revenue $128

P8-40B Accounting for notes receivable, dishonored notes, and accrued interest revenue

Consider the following transactions for TLC Company.

2018	
Dec. 6	Received a $8,000, 90-day, 9% note in settlement of an overdue accounts receivable from Forest Music.
31	Made an adjusting entry to accrue interest on the Forest Music note.
31	Made a closing entry for interest revenue.
2019	
Mar. 6	Collected the maturity value of the Forest Music note.
Jun. 30	Loaned $14,000 cash to Washington Music, receiving a six-month, 12% note.
Oct. 2	Received a $1,000, 60-day, 12% note for a sale to ZZZ Music. Ignore Cost of Goods Sold.
Dec. 1	ZZZ Music dishonored its note at maturity.
1	Wrote off the receivable associated with ZZZ Music. (Use the allowance method.)
30	Collected the maturity value of the Washington Music note.

Journalize all transactions for TLC Company. Round all amounts to the nearest dollar.

Learning Objective 5

1. Days' sales in receivables (2018) 18 days

P8-41B Using ratio data to evaluate a company's financial position

The comparative financial statements of Newton Cosmetic Supply for 2018, 2017, and 2016 include the data shown here:

	2018	2017	2016
Balance sheet—partial			
Current Assets:			
Cash	$ 80,000	$ 50,000	$ 30,000
Short-term investment	150,000	170,000	125,000
Accounts Receivable, Net	310,000	260,000	220,000
Merchandise Inventory	360,000	335,000	330,000
Prepaid Expenses	50,000	30,000	35,000
Total Current Assets	950,000	845,000	740,000
Total Current Liabilities	530,000	630,000	670,000
Income statement—partial			
Net Sales (all on account)	5,850,000	5,110,000	425,000

Requirements

1. Compute these ratios for 2018 and 2017:
   a. Acid-test ratio (Round to two decimals.)
   b. Accounts receivable turnover (Round to two decimals.)
   c. Days' sales in receivables (Round to the nearest whole day.)
2. Considering each ratio individually, which ratios improved from 2017 to 2018 and which ratios deteriorated? Is the trend favorable or unfavorable for the company?

CRITICAL THINKING

> Using Excel

P8-42 Using Excel for Aging Accounts Receivable

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

The Lake Lucerne Company uses the allowance method of estimating bad debts expense. An aging schedule is prepared in order to calculate the balance in the allowance account. The percentage uncollectible is calculated as follows:

1–30 Days	1%
31–60 Days	2%
61–90 Days	5%
91–365 Days	50%

After 365 days, the account is written off.

Requirements

1. Calculate the number of days each receivable is outstanding.
2. Complete the Schedule of Accounts Receivable.
3. Journalize the adjusting entry for Bad Debts Expense.

> Continuing Problem

P8-43 Accounting for uncollectible accounts using the allowance method

This problem continues the Canyon Canoe Company situation from Chapter 7. Canyon Canoe Company has experienced rapid growth in its first few months of operations and has had a significant increase in customers renting canoes and purchasing T-shirts. Many of these customers are asking for credit terms. Amber and Zack Wilson, stockholders and company managers, have decided it is time to review their business transactions and update some of their business practices. Their first step is to make decisions about handling accounts receivable.

So far, year to date credit sales have been $15,500. A review of outstanding receivables resulted in the following aging schedule:

Age of Accounts as of June 30, 2019					
Customer Name	1–30 Days	31–60 Days	61–90 Days	Over 90 Days	Total Balance
Canyon Youth Club	$ 250				$ 250
Crazy Tees	200	$ 150			350
Early Start Daycare				$ 500	500
Lakefront Pavilion	575				575
Outdoor Center			$ 300		300
Rivers Canoe Club	350				350
Sport Shirts	450	120			570
Zack's Marina	75	75	75		225
Totals	$ 1,900	$ 345	$ 375	$ 500	$ 3,120

Requirements

1. The company wants to use the allowance method to estimate bad debts. Determine the estimated bad debts expense under the following methods at June 30, 2019. Assume a zero beginning balance for Allowance for Bad Debts. Round to the nearest dollar.
   a. Percent-of-sales method, assuming 4.5% of credit sales will not be collected.
   b. Percent-of-receivables method, assuming 22.5% of receivables will not be collected.
   c. Aging-of-receivables method, assuming 5% of invoices 1–30 days will not be collected, 20% of invoices 31–60 days, 40% of invoices 61–90 days, and 75% of invoices over 90 days.
2. Journalize the entry at June 30, 2019, to adjust for bad debts expense using the percent-of-sales method.
3. Journalize the entry at June 30, 2019, to record the write-off of the Early Start Daycare invoice.
4. At June 30, 2019, open T-accounts for Accounts Receivable and Allowance for Bad Debts before Requirements 2 and 3. Post entries from Requirements 2 and 3 to those accounts. Assume a zero beginning balance for Allowance for Bad Debts.
5. Show how Canyon Canoe Company will report net accounts receivable on the balance sheet on June 30, 2019.

> Practice Set

P8-44 Accounting for uncollectible accounts using the allowance method and reporting net accounts receivable on the balance sheet

This problem continues the Crystal Clear Cleaning problem begun in Chapter 2 and continued through Chapter 7.

Crystal Clear Cleaning uses the allowance method to estimate bad debts. Consider the following April 2019 transactions for Crystal Clear Cleaning:

Apr. 1	Performed cleaning service for Debbie's D-list for $13,000 on account with terms n/20.
10	Borrowed money from First Regional Bank, $30,000, making a 180-day, 12% note.
12	After discussions with customer More Shine, Crystal Clear has determined that $230 of the receivable owed will not be collected. Wrote off this portion of the receivable.
15	Sold goods to Warner for $9,000 on account with terms n/30. Cost of Goods Sold was $4,500.
28	Sold goods to Lelaine, Inc. for cash of $2,800 (cost $840).

28 Collected from More Shine, $230 of receivable previously written off.

29 Paid cash for utilities of $150.

30 Created an aging schedule for Crystal Clear Cleaning for accounts receivable. Crystal Clear determined that $7,000 of receivables outstanding for 1–30 days were 3% uncollectible, $10,000 of receivables outstanding for 31–60 days were 20% uncollectible, and $5,870 of receivables outstanding for more than 60 days were 30% uncollectible. Crystal Clear Cleaning determined the total amount of estimated uncollectible receivables and adjusted the Allowance for Bad Debts. Assume the account had an unadjusted credit balance of $260. (Round to nearest whole dollar.)

Requirements

1. Prepare all required journal entries for Crystal Clear. Omit explanations.
2. Show how net accounts receivable would be reported on the balance sheet as of April 30, 2019.

> Tying It All Together Case 8-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review ***Sears Holdings Corporation's*** *2015 annual report* (https://www.sec.gov/Archives/edgar/data/1310067/000131006716000059/shld201510k.htm).

Sears Holdings Corporation is the parent company of Kmart Holding Corporation and Sears, Roebuck and Co. The corporation operates more than 1,600 retail stores in the United States and offers online shopping through both sears.com and kmart.com.

Requirements

1. On which financial statement would you find Accounts Receivable?
2. What was the amount of Accounts Receivable as of January 30, 2016? As of January 31, 2015?
3. Review the notes to the financial statements and read the note labeled Allowance for Doubtful Accounts in Note 1–Summary of Significant Accounting Policies. What was the amount of Allowance for Doubtful Accounts as of January 30, 2016? As of January 31, 2015?
4. Using the information from requirements 2 and 3, determine the gross amount of Accounts Receivable as of January 30, 2016. As of January 31, 2015.
5. Find Schedule II—Valuation and Qualifying Accounts included in the notes to the financial statements. Draw a T-account that details the changes in the Allowance for Doubtful Accounts account for 2015. What would additions charged to costs and expenses represent? What would deductions from the account represent?

> Decision Cases

Decision Case 8-1

Weddings on Demand sells on account and manages its own receivables. Average experience for the past three years has been as follows:

Sales	$ 350,000
Cost of Goods Sold	210,000
Bad Debts Expense	4,000
Other Expenses	61,000

Unhappy with the amount of bad debts expense she has been experiencing, Aledia Sanchez, controller, is considering a major change in the business. Her plan would be to stop selling on account altogether but accept either cash, credit cards, or debit cards from her customers. Her market research indicates that if she does so, her sales will increase by 10% (i.e., from $350,000 to $385,000), of which $200,000 will be credit or debit card sales and the rest will be cash sales. With a 10% increase in sales, there will also be a 10% increase in Cost of Goods Sold. If she adopts this plan, she will no longer have bad debts expense, but she will have to pay a fee on debit/credit card transactions of 2% of applicable sales. She also believes this plan will allow her to save $5,000 per year in other operating expenses.

Should Sanchez start accepting credit cards and debit cards? Show the computations of net income under her present arrangement and under the plan.

Decision Case 8-2

Pauline's Pottery has always used the direct write-off method to account for uncollectibles. The company's revenues, bad debt write-offs, and year-end receivables for the most recent year follow:

Year	Revenues	Write-offs	Receivables at Year-end
2018	$ 150,000	$ 3,900	$ 14,000

The business is applying for a bank loan, and the loan officer requires figures based on the allowance method of accounting for bad debts. In the past, bad debts have run about 4% of revenues.

Requirements

Pauline must give the banker the following information:

1. How much more or less would net income be for 2018 if Pauline's Pottery were to use the allowance method for bad debts? Assume Pauline uses the percent-of-sales method.
2. How much of the receivables balance at the end of 2018 does Pauline's Pottery actually expect to collect? (Disregard beginning account balances for the purpose of this question.)
3. Explain why net income is more or less using the allowance method versus the direct write-off method for uncollectibles.

> Fraud Case 8-1

Dylan worked for a propane gas distributor as an accounting clerk in a small Midwestern town. Last winter, his brother Mike lost his job at the machine plant. By January, temperatures were sub-zero, and Mike had run out of money. Dylan saw that Mike's account was overdue, and he knew Mike needed another delivery to heat his home. He decided to credit Mike's account and debit the balance to the parts inventory because he knew the parts manager, the owner's son, was incompetent and would never notice the extra entry. Months went by, and Dylan repeated the process until an auditor ran across the charges by chance. When the owner fired Dylan, he said, "If you had only come to me and told me about Mike's situation, we could have worked something out."

Requirements

1. What can a business like this do to prevent employee fraud of this kind?
2. What effect would Dylan's actions have on the balance sheet? The income statement?
3. How much discretion does a business have with regard to accommodating hardship situations?

> Financial Statement Case 8-1

Use **Target Corporation's** Fiscal 2015 Annual Report and the Note 9 data on "Credit Card Receivables Transaction" to answer the following questions. Visit http://www.pearsonhighered.com/Horngren to view a link to Target Corporation's annual report.

Requirements

1. How much accounts receivable did Target report on its balance sheet as of January 30, 2016? As of January 31, 2015?
2. Target accepts customer payments via Target brand credit cards. Refer to Note 9, "Credit Card Receivables Transaction." How does Target account for these credit card sales?
3. Refer to Note 9. What are the advantages to Target in handling Target brand credit card transactions as it does? What are Target's responsibilities concerning these credit cards?
4. Compute Target's acid-test ratio as of January 30, 2016 and January 31, 2015. Did the ratio improve or deteriorate? For each date, if all the current liabilities came due immediately, could Target pay them?

> Quick Check Answers

1. d **2.** d **3.** d **4.** a **5.** d **6.** d **7.** b **8.** c **9.** a **10.** d

Chapter 8
Receivables

Review Questions

1. Accounts receivable represent the right to receive cash in the future from customers for goods sold or for services performed. Accounts receivable are usually collected within a short period of time such as 30 or 60 days. Notes receivable are usually longer in term than accounts receivable. Notes receivable represent a written promise that a borrower will pay a fixed amount of principal plus interest by a certain date in the future.

2. Common examples of other receivables include dividends receivable, interest receivable, and taxes receivable.

3. A critical element of internal control is the separation of cash-handling and cash-accounting duties. For good internal control over cash collections from receivables, separation of duties must be maintained and the credit department should have no access to cash. Additionally, those who handle cash should not be in a position to grant credit to customers.

4. A business must maintain a separate accounts receivable account for each customer in order to account for payments received from the customer and amounts still owed. All sales and collections from that customer are tracked in that account, along with the balance.

5. The balance in all the subsidiary accounts receivable accounts must equal the total balance of the control account, Accounts Receivable.

6. The benefits to a business of accepting credit cards and debit cards include the ability to attract more customers, not having to check each customer's credit rating, and not having to keep accounts receivable records or receive collections from the customer.

7. When a business factors its receivables, it sells its receivables to a finance company or bank (often called a factor). The business receives cash less an applicable fee from the factor for the receivables. The factor, instead of the business, now collects the cash on the receivables. The business no longer has to deal with the recordkeeping and collection of the receivables.

8. In a pledging situation, a business uses its receivables as security for a loan. The business borrows money from a bank and offers its receivables as collateral. The business still is responsible for collecting on the receivables and uses the money collected to pay off the loan along with interest. In pledging, if the loan is not paid, the bank can collect on the receivables.

9. Bad Debts Expense is the account associated with the cost of the uncollectible receivables.

10. Under the direct write-off method, accounts receivables are written off and bad debts expense is recorded when the business determines that it will never collect from a specific customer.

11. Limitations of the direct write-off method are that it violates the matching principle and is not allowed by GAAP. The matching principle requires that the expense of uncollectible accounts be matched with the related revenue. Under the direct write-off method the expense can occur in future months or years. In addition, the accounts receivable (asset) are overstated on the balance sheet.

12. Under the allowance method, bad debts expense is estimated and recorded in the same period as the sales revenue as an adjusting entry at the end of the accounting period.

13. Under the allowance method, accounts receivable are shown at the net realizable value. Net realizable value is the net value that the company expects to collect from its receivables (Accounts Receivable less Allowance for Bad Debts).

14. When using the allowance method, the Allowance for Bad Debts account is debited when writing off uncollectible accounts. This is different than the direct write-off method, which would debit Bad Debts Expense. The allowance method does not affect net income when an account is written off.

15. When an account is written off with the allowance method, there is no change in the net realizable value shown on the balance sheet.

16. The percent-of-sales method computes bad debts expense as a percentage of net credit sales.

17. In both the percent-of-receivables method and aging-of-receivables method, the business determines the target balance of the Allowance for Bad Debts account based on a percentage of accounts receivable. This target balance is then used to determine the amount of bad debts expense after considering the previous balance in the Allowance for Bad Debts.

18. In the percent-of-receivables method, the business uses only one percentage to determine the balance of the Allowance for Bad Debts account. However, in the aging-of-receivables method, the business groups' individual accounts according to how long the receivable has been outstanding. They then apply a different percentage to each aging category.

19. The income statement approach focuses on the amount of expense, Bad Debt Expense, that is reported on the income statement. The amount is determined by multiplying the estimated percentage by net credit sales. The balance sheet approach focuses on Accounts Receivable, a balance sheet account, and determines a target allowance balance based on a percentage of the receivable balance.

20. The formula for computing interest is as follows: Amount of interest = Principal × Interest rate × Time.

21. The interest revenue earned on the note up to year-end is part of that year's earnings. Interest revenue is earned over time, not just when cash is received. Because of the revenue recognition principle, a business must record the earnings from the note in the year in which they were earned.

22. The acid-test ratio is a ratio of the sum of cash (including cash equivalents) plus short-term investments plus net current receivables to total current liabilities. The acid-test ratio reveals whether the entity could pay all its current liabilities if they were to become due immediately.

23. The accounts receivable turnover ratio measures the number of times the company collects the average accounts receivable balance in a year. The higher the ratio, the faster the cash collections. It is calculated by taking net credit sales divided by average net accounts receivable.

24. Days' sales in receivables, also called the collection period, indicates how many days it takes to collect the average level of accounts receivable. The number of days' sales in receivables should be close to the number of days customers are allowed to pay when credit is extended. The shorter the collection period, the more quickly the organization can use its cash. The longer the collection period, the less cash is available for operations. It is calculated by taking 365 days divided by the accounts receivable turnover ratio.

Short Exercises

S8-1

The company's credit department should not take customer payments or have any other cash-handling responsibilities. For example, if a credit department employee also handles cash, the company would have no separation of duties. The employee could pocket money received from a customer. He or she could then label the customer's account as uncollectible, and the company would stop billing that customer. The employee may be able to cover his or her theft.

S8-2

Date	Accounts and Explanation	Debit	Credit
Apr. 15	Accounts Receivable—Jones	1,500	
	Service Revenue		1,500
18	Accounts Receivable—Cruise	865	
	Service Revenue		865
25	Cash	750	
	Accounts Receivable—Jones		750
28	Accounts Receivable—Taylor	625	
	Service Revenue		625
28	Cash	865	
	Accounts Receivable—Cruise		865
30	Cash	1,375	
	Accounts Receivable—Jones		750
	Accounts Receivable—Taylor		625

S8-3
Requirement 1

Date	Accounts and Explanation	Debit	Credit
May 31	Bad Debts Expense	1,100	
	Accounts Receivable		1,100
	Wrote off uncollectible accounts.		

Requirement 2

Accounts Receivable

Apr. 30 Bal.	19,000	15,000	Collections
Net credit sales	22,000	1,100	Write-offs
Bal.	24,900		

S8-4

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 19	Bad Debts Expense	600	
	Accounts Receivable—Stone		600
	Wrote off receivable.		
Dec. 31	Accounts Receivable—Stone	600	
	Bad Debts Expense		600
	Reinstated previously written off account.		
31	Cash	600	
	Accounts Receivable—Stone		600
	Collected cash on account.		

S8-5
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
a.	Accounts Receivable	273,400	
	Sales Revenue		273,400
b.	Cash	223,000	
	Accounts Receivable		223,000
c.	Allowance for Bad Debts	5,900	
	Accounts Receivable		5,900
d.	Bad Debts Expense	5,200	
	Allowance for Bad Debts		5,200

S8-5, cont.
Requirement 2

Accounts Receivable			
Dec. 31, 2017, Bal.	10,800	223,000	Collections
Net credit sales	273,400	5,900	Write-offs
Dec. 31, 2018, Bal.	55,300		

Allowance for Bad Debts			
		2,000	Dec. 31, 2017, Bal.
Write-offs	5,900	5,200	Adj.
		1,300	Dec. 31, 2018, Bal.

Bad Debts Expense		
Adj.	5,200	
Dec. 31, 2018, Bal.	5,200	

Requirement 3

SIGNATURE LAMP COMPANY
Balance Sheet−Partial
December 31, 2018

Assets		
Current Assets:		
Accounts Receivable	$ 55,300	
Less: Allowance for Bad Debts	(1,300)	$ 54,000

S8-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense ($311,000 × 3%)	9,330	
	Allowance for Bad Debts		9,330
	Recorded bad debts expense for the period.		

S8-6, cont.
Requirement 2

FALL WINE TOUR Balance Sheet−Partial December 31, 2018		
Assets		
Current Assets:		
Accounts Receivable	$ 44,000	
Less: Allowance for Bad Debts	(9,330)	$ 34,670

S8-7
Requirement 1

Accounts Receivable			
Dec. 31, 2017, Bal. 20,000		325,000	Collections
Net credit sales 454,000		5,600	Write-offs
Dec. 31, 2018, Bal. 143,400			

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	4,470	
	Allowance for Bad Debts		4,470
	($143,400 × 5% = $7,170; $7,170 – $2,700 = $4,470)		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	9,570	
	Allowance for Bad Debts		9,570
	($143,400 × 5% = $7,170; $7,170 + $2,400 = $9,570)		

S8-8
Requirement 1

	Age of Accounts Receivable		
	0 – 60 Days	Over 60 Days	Total Receivables
Accounts Receivable	$78,000	$3,000	$81,000
Percent uncollectible	× 2%	× 23%	
Estimated total uncollectible	$ 1,560	$ 690	$2,250 (Target Balance)

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	187	
	Allowance for Bad Debts		187
	($2,250 – $2,063 = $187)		

Requirement 2

Allowance for Bad Debts

	2,063	Unadj. Bal.
	187	Adj.
	2,250	Bal.

S8-9

	Principal	Interest Rate	Interest Period	Interest Revenue Earned
Note 1	$ 30,000	× 0.06	× 6/12 =	$ 900
Note 2	12,000	× 0.10	× 270/365 =	888
Note 3	14,000	× 0.14	× 75/365 =	403
Note 4	100,000	× 0.07	× 10/12 =	5,833

S8-10
Requirement 1

Date	Accounts and Explanation	Debit	Credit
June 6	Notes Receivable—Stow	80,000	
	Cash		80,000
	Lent money to Stephan Stow.		

S8-10, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jul. 6	Cash ($80,000 + $592)	80,592	
	Notes Receivable—Stow		80,000
	Interest Revenue ($80,000 × 0.09 × 30/365)		592
	Collected note receivable plus interest.		

S8-11
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Notes Receivable—Michael	12,000	
	Accounts Receivable—Michael		12,000
	Accepted note receivable in exchange for an account receivable.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Interest Receivable	89	
	Interest Revenue ($12,000 × 0.09 × 30/365)		89
	Accrued interest earned.		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Jan. 30	Cash ($12,000 + $89 + $89)	12,178	
	Notes Receivable—Michael		12,000
	Interest Receivable		89
	Interest Revenue ($12,000 × 0.09 × 30/365)		89
	Collected note receivable plus interest.		

S8-12

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 1	Accounts Receivable—Peters	18,405	
	Notes Receivable—Peters		18,000
	Interest Revenue ($18,000 × 0.09 × 3/12)		405
	Recorded default of loan.		

S8-13

a) Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities
= ($573,720 + $148,000 + $11,000) / ($328,000 + $188,000)
= $732,720 / $516,000
= 1.42
The acid-test ratio is a strong ratio.

b) Accounts receivable turnover ratio = Net credit sales / Average net accounts receivables
= $3,212,000 / [($11,000 + $165,000) / 2]
= $3,212,000 / $88,000
= 36.50
The accounts receivable turnover ratio is strong relative to credit terms of net 30.

c) Days' sales in receivables = 365 days / Accounts receivable turnover ratio
= 365 days / 36.50
= 10 days
The days' sales in receivables is strong relative to credit terms of net 30.

Exercises

E8-14

1. F
2. E
3. A
4. C
5. D
6. B

E8-15

The internal control weakness is that the credit department receives incoming cash from customers. With access to cash, an employee in the credit department can pocket cash received from a customer and destroy the remittance slip. The credit department can then write-off the customer's account as uncollectible, and the company will stop pursuing collection from the customer.

To strengthen the controls, the company can have cash go to a lock box belonging to the bank or to the company mail room, not to the credit department. An employee that is outside of the credit department should then handle the receipt of the cash.

Student responses may vary.

E8-16
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jun. 1	Accounts Receivable—Carter Company	1,575	
	Sales Revenue		1,575
6	Cash	550	
	Sales Revenue		550
12	Cash	1,575	
	Accounts Receivable—Carter Company		1,575
20	Accounts Receivable—Iris Company	765	
	Sales Revenue		765
22	Accounts Receivable—Driver Company	230	
	Sales Revenue		230
28	Cash	300	
	Accounts Receivable—Iris		300

Requirement 2

GENERAL LEDGER

Cash

Jun. 6	550		
12	1,575		
28	300		
Bal.	2,425		

Accounts Receivable

Jun. 1	1,575	1,575	Jun. 12
20	765	300	28
22	230		
Bal.	695		

Sales Revenue

		1,575	Jun. 1
		550	6
		765	20
		230	22
		3,120	Bal.

SUBSIDIARY LEDGER

Accounts Receivable—Carter

Jun. 1	1,575	1,575	Jun. 12
Bal.	0		

Accounts Receivable—Driver

Jun. 22	230		
Bal.	230		

Accounts Receivable—Iris

Jun. 20	765	300	Jun. 28
Bal.	465		

E8-16, cont.
Requirement 3

Control Account—Accounts Receivable	$ 695
Subsidiary Ledger:	
Carter	$ 0
Driver	230
Iris	465
Total	$ 695

E8-17
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 1	Accounts Receivable—Anthony Trucking Company	21,000	
	Sales Revenue		21,000
	Record sales on account.		
Jul. 15	Cash	5,000	
	Accounts Receivable—Anthony Trucking Company		5,000
	Record payment on account.		
Sep. 5	Bad Debts Expense	16,000	
	Accounts Receivable—Anthony Trucking Company		16,000
	Wrote-off account balance.		
2019			
Mar. 5	Accounts Receivable—Anthony Trucking Company	16,000	
	Bad Debts Expense		16,000
	Reinstated previously written off account.		
5	Cash	16,000	
	Accounts Receivable—Anthony Trucking Company		16,000
	Collected cash on account.		

Requirement 2

Best Performance will encounter limitations with the direct write-off method because it violates the matching principle. The matching principle requires that the expense of uncollectible accounts be matched with the related revenue. For example when using the direct write-off method, a company might record sales revenue in 2018 but not record the bad debts expense until 2019. By recording the bad debts expense in a different year than when the revenue was recorded, the company is overstating net income in 2018 and understating net income in 2019. In addition, on the balance sheet, Accounts Receivable will be overstated in 2018 because the company will have some receivables that will be uncollectible but are not yet written off. This method is only acceptable for companies that have very few uncollectible receivables.

E8-18
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
a.	Accounts Receivable	164,000	
	Cash	21,000	
	Sales Revenue		185,000
b.	Cash	135,000	
	Accounts Receivable		135,000
c.	Allowance for Bad Debts	2,300	
	Accounts Receivable		2,300

Requirement 2

Accounts Receivable

Jan. 1, 2018, Bal.	28,000	135,000	Collections
Net credit sales	164,000	2,300	Write-offs
Dec. 31, 2018, Bal.	54,700		

Allowance for Bad Debts

		3,000	Jan. 1, 2018, Bal.
Write-offs	2,300		
		700	Unadj. Bal.

E8-18, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	4,920	
	Allowance for Bad Debts		4,920
	3% × $164,000 = $4,920		

Allowance for Bad Debts

		3,000	Jan. 1, 2018, Bal.
Write-offs	2,300		
		700	Unadj. Bal.
		4,920	Adj.
		5,620	Dec. 31, 2018, Bal.

Bad Debts Expense

Jan. 1, 2018, Bal.	0	
Adj.	4,920	
Dec. 31, 2018, Bal.	4,920	

Requirement 4

HILLTOP FLAGPOLES **Balance Sheet−Partial** **December 31, 2018**		
Assets		
Current Assets:		
Accounts Receivable	$ 54,700	
Less: Allowance for Bad Debts	(5,620)	$49,080

E8-19
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
a.	Accounts Receivable	164,000	
	Cash	21,000	
	Sales Revenue		185,000
b.	Cash	135,000	
	Accounts Receivable		135,000
c.	Allowance for Bad Debts	2,300	
	Accounts Receivable		2,300

Requirement 2

Accounts Receivable

Jan. 1, 2018, Bal.	28,000	135,000	Collections
Net credit sales	164,000	2,300	Write-offs
Dec. 31, 2018, Bal.	54,700		

Allowance for Bad Debts

		3,000	Jan. 1, 2018, Bal.
Write-offs	2,300		
		700	Unadj. Bal.

E8-19, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	4,770	
	Allowance for Bad Debts		4,770
	10% × $54,700 = $5,470; $5,470 – $700 = $4,770		

Allowance for Bad Debts

		3,000	Jan. 1, 2018, Bal.
Write-offs	2,300		
		700	Unadj. Bal.
		4,770	Adj.
		5,470	Dec. 31, 2018, Bal.

Bad Debts Expense

Jan. 1, 2018, Bal.	0	
Adj.	4,770	
Dec. 31, 2018, Bal.	4,770	

Requirement 4

HILLTOP FLAGPOLES
Balance Sheet−Partial
December 31, 2018

Assets		
Current Assets:		
Accounts Receivable	$ 54,700	
Less: Allowance for Bad Debts	(5,470)	$ 49,230

E8-20
Requirement 1

	Age of Accounts Receivable				
	1 – 30 Days	31 – 60 Days	61 – 90 Days	Over 90 Days	Total Receivables
Accounts Receivable	$ 65,000	$ 50,000	$ 40,000	$ 45,000	$200,000
Percent uncollectible	0.4%	3.0%	5.0%	48.0%	
Estimated total uncollectible	$ 260	$ 1,500	$ 2,000	$ 21,600	$ 25,360 (Target Balance)

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	49,470	
	Allowance for Bad Debts		49,470
	$24110 + $25,360 = $49,470		

Requirement 2

Allowance for Bad Debts

Unadj. Bal.	24,110		
		49,470	Adj.
		25,360	Bal.

GPS TECHNOLOGY
Balance Sheet−Partial
December 31, 2018

Assets

Current Assets:		
Accounts Receivable	$ 200,000	
Less: Allowance for Bad Debts	(25,360)	$ 174,640

E8-21

Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Aug.	Accounts Receivable	122,000	
	Cash	11,300	
	Sales Revenue		133,300
	Recorded sales for the month.		
	Cash	106,400	
	Accounts Receivable		106,400
	Recorded collections on account.		
	Bad Debts Expense	990	
	Accounts Receivable		990
	Wrote-off uncollectible receivables.		
	Accounts Receivable	800	
	Bad Debts Expense		800
	Reinstated previously written off account.		
	Cash	800	
	Accounts Receivable		800
	Recorded collection of account.		

E8-21, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Aug.	Accounts Receivable	122,000	
	Cash	11,300	
	Sales Revenue		133,300
	Record sales for the month.		
	Cash	106,400	
	Accounts Receivable		106,400
	Record collections on account.		
	Allowance for Bad Debts	990	
	Accounts Receivable		990
	Write-off uncollectible receivables.		
	Accounts Receivable	800	
	Allowance for Bad Debts		800
	Reinstate previously written off account.		
	Cash	800	
	Accounts Receivable		800
	Record collection of account.		

E8-22

Date	Accounts and Explanation	Debit	Credit
2018			
May 6	Accounts Receivable	102,000	
	Sales Revenue		102,000
	Recorded credit sales.		
Jul. 1	Notes Receivable—Paul	18,000	
	Cash		18,000
	Recorded loan to employee.		
Dec. 31	Interest Receivable	630	
	Interest Revenue ($18,000 × 0.07 × 6/12)		630
	Accrued interest earned on Paul note.		
2019			
Jul. 1	Cash ($18,000 + $630 + $630)	19,260	
	Interest Receivable		630
	Interest Revenue ($18,000 × 0.07 × 6/12)		630
	Notes Receivable—Paul		18,000
	Collected note and interest from Paul.		

E8-23
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 30	Notes Receivable—Kendall Warner	94,000	
	Cash		94,000
	Recorded loan to Kendall Warner.		
Dec. 31	Interest Receivable	1,410	
	Interest Revenue ($94,000 × 0.06 × 3/12)		1,410
	Accrued interest earned on Warner note.		
2019			
Sep. 30	Cash ($94,000 + $1,410 + $4,230)	99,640	
	Interest Receivable		1,410
	Interest Revenue ($94,000 × 0.06 × 9/12)		4,230
	Notes Receivable—Kendall Warner		94,000
	Collected note and interest from Warner.		

E8-23, cont.
Requirement 2

a.	note receivable	Team Bank
b.	note payable	Kendall Warner
c.	interest revenue	Team Bank
d.	interest expense	Kendall Warner

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 30	Accounts Receivable—Kendall Warner	99,640	
	Interest Receivable		1,410
	Interest Revenue ($94,000 × 0.06 × 9/12)		4,230
	Notes Receivable—Kendall Warner		94,000
	To record dishonored note.		

E8-24

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 1	Notes Receivable—Shyne	16,000	
	Cash		16,000
	Recorded loan to Bud Shyne.		
Sep. 6	Notes Receivable—Lawn Pro	11,000	
	Sales Revenue		11,000
	Sold goods for a note.		
30	Interest Receivable	363	
	Interest Revenue ($320 + $43)		363
	($16,000 × 0.08 × 3/12)+($11,000 × 0.06 × 24/365)		
	Accrued interest earned on the two notes.		
Dec. 5	Cash ($11,000 + $43 + $119)	11,162	
	Interest Receivable		43
	Interest Revenue ($11,000 × 0.06 × 66/365)		119
	Notes Receivable—Lawn Pro		11,000
	Collected note and interest from Lawn Pro.		
2019			
Jul. 1	Cash ($16,000 + $320 + $960)	17,280	
	Interest Receivable		320
	Interest Revenue ($16,000 × 0.08 × 9/12)		960
	Notes Receivable—Shyne		16,000
	Collected note and interest from Shyne.		

E8-25

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 28	Accounts Receivable—Parkview Club	18,000	
	Service Revenue		18,000
	Performed services on account.		
Sep. 1	Notes Receivable—Parkview Club	18,000	
	Accounts Receivable—Parkview Club		18,000
	Received note in satisfaction of past due account		
Oct. 31	Cash ($18,000 + $355)	18,355	
	Interest Revenue ($18,000 × 0.12 × 60/365)		355
	Notes Receivable—Parkview Club		18,000
	Collected note and interest from Parkview.		

E8-26
Requirement 1

Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities
2018
= ($5,000 + $25,000 + $57,000) / $105,000
= $87,000 / $105,000
= 0.83 (rounded)
2017
= ($11,000 + $14,000 + $71,000) / $107,000
= $96,000 / $107,000
= 0.90 (rounded)

The acid-test ratio deteriorated from 2017 to 2018. The company's acid-test ratio is a little better than the industry average of 0.80.

Requirement 2

Accounts receivable turnover ratio = Net credit sales / Average net accounts receivable
2018
= $742,400 / [($57,000 +$71,000) / 2]
= $742,400 / $64,000
= 11.60

The company's accounts receivable turnover ratio is better than the industry average of 10.

E8-26, cont.
Requirement 3

Days' sales in receivables = 365 days / Accounts receivable turnover ratio
= 365 days / 11.60
= 31 days (rounded)

Abanaki's days' sales in receivables calculation is a little worse than the company's net 30-day credit period.

E8-27
Requirement 1

Accounts receivable turnover ratio = Net credit sales / Average net accounts receivables
2018
= $594,920 / [($38,500 + $47,100) / 2]
= $594,920 / $42,800
= 13.90

Days' sales in receivables = 365 days / Accounts receivable turnover ratio
= 365 days / 13.90
= 26 days (rounded)

Requirement 2

Unique's collection period is shorter than the 30 day credit terms. This is good for Unique. It appears that some of their credit customers are taking advantage of the discount for early payment.

Problems (Group A)

P8-28A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 30	Accounts Receivable	550,000	
	Sales Revenue		550,000
30	Cash	584,000	
	Accounts Receivable		584,000
30	Allowance for Bad Debts	4,000	
	Accounts Receivable		4,000
30	Bad Debts Expense	11,000	
	Allowance for Bad Debts		11,000
	(2% × $550,000 = $11,000)		

Accounts Receivable

Aug. 31 Bal.	140,000	584,000	Collections
Net credit sales	550,000	4,000	Write-offs
Sep. 30 Bal.	102,000		

Allowance for Bad Debts

		5,600	Aug. 31 Bal.
Write-offs	4,000	11,000	Adj.
		12,600	Sep. 30 Bal.

Bad Debts Expense

Adj.	11,000		
Sep. 30 Bal.	11,000		

P8-28A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 30	Accounts Receivable	550,000	
	Sales Revenue		550,000
30	Cash	584,000	
	Accounts Receivable		584,000
30	Bad Debts Expense	4,000	
	Accounts Receivable		4,000

Accounts Receivable

Aug. 31 Bal.	140,000	584,000	Collections
Net credit sales	550,000	4,000	Write-offs
Sep. 30 Bal.	102,000		

Bad Debts Expense

Write-offs	4,000	
Sep. 30 Bal.	4,000	

Requirement 3

Income Statement	Allowance Method	Direct Write-Off Method
Bad Debts Expense	$ 11,000	$ 4,000

Bad Debts Expense under the allowance method better matches expense with revenue because the expense is recorded in the same period the sales are made.

Requirement 4

Balance Sheet	Allowance Method	Direct Write-Off Method
Accounts Receivable	$102,000	$ 102,000
Less: Allowance for Bad Debts	(12,600)	
Accounts Receivable, net	$ 89,400	

Net accounts receivable under the allowance method is more realistic because it shows the amount of the receivables that the company expects to collect.

P8-29A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
	Accounts Receivable	450,000	
	Sales Revenue		450,000
	Cash	427,100	
	Accounts Receivable		427,100
	Allowance for Bad Debts	2,900	
	Accounts Receivable—Regan, Co.		1,400
	Accounts Receivable—Owen Reiss		800
	Accounts Receivable—Patterson, Inc.		700
Dec. 31	Bad Debts Expense	7,882	
	Allowance for Bad Debts		7,882
	($8,482 – $600 = $7,882)		

	Age of Accounts Receivable				
	1 – 30 Days	31 – 60 Days	61 – 90 Days	Over 90 Days	Total Receivables
Accounts Receivable	$104,000	$39,000	$14,000	$ 8,000	$165,000
Percent uncollectible	× 0.3%	× 3.0%	× 30.0%	× 35.0%	
Estimated total uncollectible	$ 312	$ 1,170	$ 4,200	$ 2,800	$8,482 (Target Balance)

Accounts Receivable

Sep. 30 Bal.	145,000	427,100	Collections
Net credit sales	450,000	2,900	Write-offs
Dec. 31 Bal.	165,000		

Allowance for Bad Debts

		3,500	Sep. 30 Bal.
Write-offs	2,900		
		600	Unadj. Bal.
		7,882	Adj.
		8,482	Dec. 31 Bal.

P8-29A, cont.
Requirement 2

GREEN TERRACE MEDICAL CENTER Balance Sheet−Partial December 31, 2018		
Assets		
Current Assets:		
Accounts Receivable	$ 165,000	
Less: Allowance for Bad Debts	(8,482)	$ 156,518

P8-30A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	9,000	
	Allowance for Bad Debts		9,000
	(2% × $450,000 = $9,000)		
31	Income Summary	9,000	
	Bad Debts Expense		9,000
2019			
Jan. 17	Accounts Receivable—Mack Smith	400	
	Sales Revenue		400
Jun. 29	Allowance for Bad Debts	400	
	Accounts Receivable—Mack Smith		400
Aug. 6	Accounts Receivable—Mack Smith	400	
	Allowance for Bad Debts		400
6	Cash	400	
	Accounts Receivable—Mack Smith		400
Dec. 31	Allowance for Bad Debts	3,000	
	Accounts Receivable—Cam Carter		1,400
	Accounts Receivable—Mike Venture		1,200
	Accounts Receivable—Russell Reeves		400
31	Bad Debts Expense	10,200	
	Allowance for Bad Debts		10,200
	(2% × $510,000 = $10,200)		
31	Income Summary	10,200	
	Bad Debts Expense		10,200

P8-30A, cont.
Requirement 1, cont.

Allowance for Bad Debts

		0	Beginning Bal.
		9,000	Dec. 31, Adj.
		9,000	Dec. 31, 2018, Bal.
Jun. 29, Write-off	400		
		400	Aug. 6, Reinstate
Dec. 31, Write-offs	3,000		
		10,200	Dec. 31, Adj.
		16,200	Dec. 31, 2019, Bal.

Bad Debts Expense

Beginning Bal.	0		
Dec. 31, Adj.	9,000		
Adj. Bal.	9,000		
		9,000	Dec. 31, Closing
Dec. 31, 2018, Bal.	0		
Dec. 31, 2019, Adj.	10,200		
Adj. Bal.	10,200		
		10,200	Dec. 31, Closing
Dec. 31, 2019, Bal.	0		

Requirement 2

DELTA WATCHES
Balance Sheet−Partial
December 31, 2019

Assets

Current Assets:		
Accounts Receivable	$ 136,000	
Less: Allowance for Bad Debts	(16,200)	$ 119,800

P8-31A

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 1	Notes Receivable—Stan-Mart	41,000	
	Sales Revenue		41,000
Oct. 31	Cash	24,000	
	Sales Revenue		24,000
Dec. 31	Interest Receivable	1,640	
	Interest Revenue		1,640
	($41,000 × 0.08 × 6/12)		
31	Bad Debts Expense	2,000	
	Allowance for Bad Debts		2,000
	($13,800 – $11,800 = $2,000)		
2019			
Apr. 1	Cash ($41,000 + $1,640 + $820)	43,460	
	Interest Receivable		1,640
	Interest Revenue ($41,000 × 0.08 × 3/12)		820
	Notes Receivable—Stan-Mart		41,000
Jun. 23	Notes Receivable—Appeal, Corp.	7,000	
	Sales Revenue		7,000
Aug. 22	Accounts Receivable—Appeal, Corp.	7,069	
	Interest Revenue ($7,000 × 0.06 × 60/365)		69
	Notes Receivable – Appeal, Corp.		7,000
Nov. 16	Notes Receivable—Crosby, Inc.	17,000	
	Cash		17,000
Dec. 5	Cash	7,069	
	Accounts Receivable—Appeal, Corp.		7,069
31	Interest Receivable	335	
	Interest Revenue		335
	($17,000 × 0.16 × 45/365)		

P8-32A
Requirement 1

	Principal	Interest Rate	Interest Period	Interest Revenue Earned	Maturity Value (P + I)	Maturity Date
Note 1	$ 6,000	× 0.07	× 12/12	$ 420	$ 6,420	Apr. 1, 2019
Note 2	12,000	× 0.06	× 6/12	360	12,360	Mar. 30, 2019
Note 3	18,000	× 0.08	× 90/365	355	18,355	Dec. 18, 2018

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 1	Notes Receivable (Note 1)	6,000	
	Cash		6,000
Sep. 30	Notes Receivable (Note 2)	12,000	
	Cash		12,000
Sep. 19	Notes Receivable (Note 3)	18,000	
	Cash		18,000
Dec. 18	Cash ($18,000 + $355)	18,355	
	Interest Revenue ($18,000 × 0.08 ×90/365)		355
	Notes Receivable (Note 3)		18,000
31	Interest Receivable	495	
	Interest Revenue		495

	Principal	Interest Rate	Interest Period	Interest Revenue Earned
Note 1	$ 6,000	× 0.07	× 9/12	$ 315
Note 2	12,000	× 0.06	× 3/12	180
				$ 495

P8-32A, cont.
Requirement 2, cont.

Date	Accounts and Explanation	Debit	Credit
2019			
Mar. 30	Cash ($12,000 + $180 + $180)	12,360	
	Interest Receivable		180
	Interest Revenue ($12,000 × 0.06 × 3/12)		180
	Notes Receivable (Note 2)		12,000
Apr. 1	Cash ($6,000 + $315 + $105)	6,420	
	Interest Receivable		315
	Interest Revenue ($6,000 × 0.07 × 3/12)		105
	Notes Receivable (Note 1)		6,000

P8-33A

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 6	Notes Receivable—Go Go Publishing	18,000	
	Accounts Receivable—Go Go Publishing		18,000
31	Interest Receivable	74	
	Interest Revenue ($18,000 × 0.06 × 25/365)		74
31	Interest Revenue	74	
	Income Summary		74
2019			
Mar. 6	Cash	18,266	
	Interest Receivable		74
	Interest Revenue ($18,000 × 0.06 × 65/365)		192
	Notes Receivable—Go Go Publishing		18,000
Jun. 30	Notes Receivable—Lincoln Music	11,000	
	Cash		11,000
Oct. 2	Notes Receivable—Tusk Music	2,400	
	Sales Revenue		2,400
Dec. 1	Accounts Receivable—Tusk Music	2,479	
	Interest Revenue ($2,400 × 0.20 × 60/365)		79
	Notes Receivable—Tusk Music		2,400
1	Allowance for Bad Debts	2,479	
	Accounts Receivable—Tusk Music		2,479
30	Cash	12,100	
	Interest Revenue ($11,000 × 0.20 × 6/12)		1,100
	Notes Receivable—Lincoln Music		11,000

P8-34A
Requirement 1

a. Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities

2018
= ($70,000 + $140,000 + $280,000) / ($560,000)
= $490,000 / $560,000
= 0.88

2017
= ($60,000 + $170,000 + $240,000) / ($630,000)
= $470,000 / $630,000
= 0.75

b. Accounts receivable turnover ratio = Net credit sales / Average net accounts receivables

2018
= $5,890,000 / [($280,000 + $240,000) / 2]
= $5,890,000 / $260,000
= 22.65

2017
= $5,130,000 / [($240,000 + $260,000) / 2]
= $5,130,000 / $250,000
= 20.52

c. Days' sales in receivables = 365 days / Accounts receivable turnover ratio

2018
= 365 days / 22.65
= 16 days (rounded)

2017
= 365 days / 20.52
= 18 days (rounded)

Requirement 2

The acid-test ratio improved from 2017 to 2018. This trend is favorable to the company.
The accounts receivable turnover improved from 2017 to 2018. This trend is favorable to the company.
The days' sales in receivables improved from 2017 to 2018. This trend is favorable to the company.

Problems (Group B)

P8-35B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 30	Accounts Receivable	530,000	
	Sales Revenue		530,000
30	Cash	573,000	
	Accounts Receivable		573,000
30	Allowance for Bad Debts	6,000	
	Accounts Receivable		6,000
30	Bad Debts Expense	10,600	
	Allowance for Bad Debts		10,600
	(2% × $530,000 = $10,600)		

Accounts Receivable

Aug. 31 Bal.	140,000	573,000	Collections
Net credit sales	530,000	6,000	Write-offs
Sep. 30 Bal.	91,000		

Allowance for Bad Debts

		5,600	Aug. 31 Bal.
Write-offs	6,000	10,600	Adj.
		10,200	Sep. 30 Bal.

Bad Debts Expense

Adj.	10,600		
Sep. 30 Bal.	10,600		

P8-35B, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Sep. 30	Accounts Receivable	530,000	
	Sales Revenue		530,000
30	Cash	573,000	
	Accounts Receivable		573,000
30	Bad Debts Expense	6,000	
	Accounts Receivable		6,000

Accounts Receivable

Aug. 31 Bal.	140,000	573,000	Collections
Net credit sales	530,000	6,000	Write-offs
Sep. 30 Bal.	91,000		

Bad Debts Expense

Write-offs	6,000		
Sep. 30 Bal.	6,000		

Requirement 3

Income Statement	Allowance Method	Direct Write-Off Method
Bad Debts Expense	$ 10,600	$ 6,000

Bad Debts Expense under the allowance method better matches expense with revenue because the expense is recorded in the same period the sales are made.

P8-35B, cont.
Requirement 4

Balance Sheet	Allowance Method	Direct Write-Off Method
Accounts Receivable	$ 91,000	$ 91,000
Less: Allowance for Bad Debts	(10,200)	
Accounts Receivable, net	$ 80,800	

Net accounts receivable under the allowance method is more realistic because it shows the amount of the receivables that the company expects to collect.

P8-36B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
	Accounts Receivable	475,000	
	Sales Revenue		475,000
	Cash	451,800	
	Accounts Receivable		451,800
	Allowance for Bad Debts	3,200	
	Accounts Receivable—Randall Co.		1,800
	Accounts Receivable—Oliver Welch		900
	Accounts Receivable—Rain, Inc.		500
Dec. 31	Bad Debts Expense	11,201	
	Allowance for Bad Debts		11,201
	($11,401 − $200 = $11,201)		

	Age of Accounts Receivable				
	1 – 30 Days	31 – 60 Days	61 – 90 Days	Over 90 Days	Total Receivables
Accounts Receivable	$97,000	$37,000	$17,000	$14,000	$ 165,000
Percent uncollectible	× 0.3%	× 3.0%	× 30.0%	× 35.0%	
Estimated total uncollectible	$ 291	$ 1,110	$ 5,100	$ 4,900	$ 11,401 (Target Balance)

Requirement 2

Accounts Receivable

Sep. 30 Bal.	145,000	451,800	Collections
Net credit sales	475,000	3,200	Write-offs
Dec. 31 Bal.	165,000		

Allowance for Bad Debts

		3,400	Sep. 30 Bal.
Write-offs	3,200		
		200	Unadj. Bal.
		11,201	Adj.
		11,401	Dec. 31 Bal.

P8-36B, cont.
Requirement 3

SPRING MOUNTAIN MEDICAL CENTER Balance Sheet−Partial December 31, 2018		
Assets		
Current Assets:		
Accounts Receivable	$ 165,000	
Less: Allowance for Bad Debts	(11,401)	$ 153,599

P8-37B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	12,300	
	Allowance for Bad Debts		12,300
	(3% × $410,000 = $12,300)		
31	Income Summary	12,300	
	Bad Debts Expense		12,300
2019			
Jan. 17	Accounts Receivable—Marty White	400	
	Sales Revenue		400
Jun. 29	Allowance for Bad Debts	400	
	Accounts Receivable—Marty White		400
Aug. 6	Accounts Receivable—Marty White	400	
	Allowance for Bad Debts		400
6	Cash	400	
	Accounts Receivable—Marty White		400
Dec. 31	Allowance for Bad Debts	3,100	
	Accounts Receivable—Barry Krisp		1,600
	Accounts Receivable—Maria Bryant		1,100
	Accounts Receivable—Richard Renik		400
31	Bad Debts Expense	14,700	
	Allowance for Bad Debts		14,700
	(3% × $490,000 = $14,700)		
31	Income Summary	14,700	
	Bad Debts Expense		14,700

P8-37B, cont.
Requirement 1, cont.

Allowance for Bad Debts

		0	Beginning Bal.
		12,300	Dec. 31, Adj.
		12,300	Dec. 31, 2018, Bal.
Jun. 29, Write-off	400		
		400	Aug. 6, Reinstate
Dec. 31, Write-offs	3,100		
		14,700	Dec. 31, Adj.
		23,900	Dec. 31, 2019, Bal.

Bad Debts Expense

Beginning Bal.	0		
Dec. 31, Adj.	12,300		
Adj. Bal.	12,300		
		12,300	Dec. 31, Closing
Dec. 31, 2018, Bal.	0		
Dec. 31, 2019, Adj.	14,700		
Adj. Bal.	14,700		
		14,700	Dec. 31, Closing
Dec. 31, 2019, Bal.	0		

Requirement 2

DIALEX WATCHES
Balance Sheet−Partial
December 31, 2019

Assets		
Current Assets:		
Accounts Receivable	$ 136,000	
Less: Allowance for Bad Debts	(23,900)	$ 112,100

P8-38B

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 1	Notes Receivable—Go-Mart	43,000	
	Sales Revenue		43,000
Oct. 31	Cash	23,000	
	Sales Revenue		23,000
Dec. 31	Interest Receivable	3,440	
	Interest Revenue		3,440
	($43,000 × 0.16 × 6/12)		
31	Bad Debts Expense	4,200	
	Allowance for Bad Debts		4,200
	($14,900 – $10,700 = $4,200)		
2019			
Apr. 1	Cash ($43,000 + $3,440 + $1,720)	48,160	
	Interest Receivable		3,440
	Interest Revenue ($43,000 × 0.16 × 3/12)		1,720
	Notes Receivable—Go-Mart		43,000
Jun. 23	Notes Receivable—Allure, Corp.	7,000	
	Sales Revenue		7,000
Aug. 22	Accounts Receivable—Allure, Corp.	7,069	
	Interest Revenue ($7,000 × 0.06 × 60/365)		69
	Notes Receivable—Allure, Corp.		7,000
Nov. 16	Notes Receivable—Tench, Inc.	20,000	
	Cash		20,000
Dec. 5	Cash	7,069	
	Accounts Receivable—Allure, Corp.		7,069
31	Interest Receivable	197	
	Interest Revenue		197
	($20,000 × 0.08 × 45/365)		

P8-39B
Requirement 1

	Principal	Interest Rate	Interest Period	Interest Revenue Earned	Maturity Value (P + I)	Maturity Date
Note 1	$ 16,000	× 0.07	× 12/12	1,120	$ 17,120	Oct. 1, 2019
Note 2	18,000	× 0.18	× 9/12	2,430	20,430	Mar. 30, 2019
Note 3	12,000	× 0.08	× 90/365	237	12,237	Dec. 18, 2018

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Oct. 1	Notes Receivable (Note 1)	16,000	
	Cash		16,000
Jun. 30	Notes Receivable (Note 2)	18,000	
	Cash		18,000
Sep. 19	Notes Receivable (Note 3)	12,000	
	Cash		12,000
Dec. 18	Cash	12,237	
	Interest Revenue		237
	Note Receivable		12,000
31	Interest Receivable	1,900	
	Interest Revenue		1,900

	Principal	Interest Rate	Interest Period	Interest Revenue Earned
Note 1	$ 16,000	× 0.07	× 3/12	$ 280
Note 2	18,000	× 0.18	× 6/12	1,620
				$ 1,900

P8-39B, cont.
Requirement 2, cont.

Date	Accounts and Explanation	Debit	Credit
2019			
Mar. 30	Cash ($18,000 + $1,620 + $810)	20,430	
	Interest Receivable		1,620
	Interest Revenue ($18,000 × 0.18 × 3/12)		810
	Notes Receivable (Note 2)		18,000
Oct. 1	Cash ($16,000 + $280 + $840)	17,120	
	Interest Receivable		280
	Interest Revenue ($16,000 × 0.07 × 9/12)		840
	Notes Receivable (Note 1)		16,000

P8-40B

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 6	Notes Receivable—Forest Music	8,000	
	Accounts Receivable—Forest Music		8,000
31	Interest Receivable	49	
	Interest Revenue ($8,000 × 0.09 × 25/365)		49
31	Interest Revenue	49	
	Income Summary		49
2019			
Mar. 6	Cash	8,177	
	Interest Receivable		49
	Interest Revenue ($8,000 × 0.09 × 65/365)		128
	Notes Receivable—Forest Music		8,000
Jun. 30	Notes Receivable—Washington Music	14,000	
	Cash		14,000
Oct. 2	Notes Receivable—ZZZ Music	1,000	
	Sales Revenue		1,000
Dec. 1	Accounts Receivable—ZZZ Music	1,020	
	Interest Revenue ($1,000 × 0.12 × 60/365)		20
	Notes Receivable—ZZZ Music		1,000
1	Allowance for Bad Debts	1,020	
	Accounts Receivable—ZZZ Music		1,020
30	Cash	14,840	
	Interest Revenue ($14,000 × 0.12 × 6/12)		840
	Notes Receivable—Washington Music		14,000

P8-41B
Requirement 1

a. Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities

2018
= ($80,000 + $150,000 + $310,000) / $530,000
= $540,000 / $530,000
= 1.02 (rounded)

2017
= ($50,000 + $170,000 + $260,000) / $630,000
= $480,000 / $630,000
= 0.76 (rounded)

b. Accounts receivable turnover ratio = Net credit sales / Average net accounts receivables

2018
= $5,850,000 / [($310,000 + $260,000) / 2]
= $5,850,000 / $285,000
= 20.53 (rounded)

2017
= $5,110,000 / [($260,000 + $220,000) / 2]
= $5,110,000 / $240,000
= 21.29

c. Days' sales in receivables = 365 days / Accounts receivable turnover ratio

2018
= 365 days / 20.53
= 18 days (rounded)

2017
= 365 days / 21.29
= 17 days (rounded)

Requirement 2

The acid-test ratio improved from 2017 to 2017. This trend is favorable to the company.
The accounts receivable turnover deteriorated from 2017 to 2018. This trend is unfavorable to the company.
The days' sales in receivables deteriorated from 2017 to 2018. This trend is unfavorable to the company.

Using Excel

P8-42

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P8-43
Requirement 1

1a. Percent-of-sales method:

Bad Debt Expense	=	4.5% of credit sales
	=	4.5% × $15,500
	=	$698

1b. Percent-of-receivables method:

Target Balance	=	22.5% of Accounts Receivable
	=	22.5% × $3,120
	=	$702

Bad Debt Expense	=	Target Balance – Unadjusted balance in Allowance for Bad Debts
	=	$702 – $0
	=	$702

1c. Aging-of-receivables method:

Age of Accounts as of June 30, 2019					
Customer Name	**1-30 Days**	**31-60 Days**	**61-90 Days**	**Over 90 Days**	**Total Balance**
Totals	$ 1,900	$ 345	$ 375	$ 500	$ 3,120
Estimated percentage uncollectible	5%	20%	40%	75%	
Estimated total uncollectible	$ 95	$ 69	$ 150	$ 375	$ 689

Bad Debt Expense	=	Target Balance – Unadjusted balance in Allowance for Bad Debts
	=	$689 – $0
	=	$689

P8-43, cont.
Requirements 2 and 3

Date	Accounts and Explanation	Debit	Credit
2019			
Jun. 30	Bad Debt Expense	698	
	Allowance for Bad Debts		698
	To estimate bad debt expense.		
30	Allowance for Bad Debts	500	
	Accounts Receivable—Early Start Daycare		500
	To write off uncollectible account receivable.		

Requirement 4

Accounts Receivable

Balance	3,120		
		500	Jun. 30
Balance	2,620		

Allowance for Bad Debts

		0	Balance
Jun. 30	500	698	Jun. 30
		198	Balance

Requirement 5

CANYON CAONOE COMPANY
Balance Sheet−Partial
June 30, 2019

Assets		
Current Assets:		
Accounts Receivable	$ 2,620	
Less: Allowance for Bad Debts	(198)	$ 2,422

Practice Set

P8-44
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2019			
Apr. 1	Accounts Receivable—Debbie's D-list	13,000	
	Service Revenue		13,000
10	Cash	30,000	
	Notes Payable—First Regional Bank		30,000
12	Allowance for Bad Debts	230	
	Accounts Receivable—More Shine		230
15	Accounts Receivable—Warner	9,000	
	Sales Revenue		9,000
	Cost of Goods Sold	4,500	
	Merchandise Inventory		4,500
28	Cash	2,800	
	Sales Revenue		2,800
	Cost of Goods Sold	840	
	Merchandise Inventory		840
28	Accounts Receivable—More Shine	230	
	Allowance for Bad Debts		230
	Cash	230	
	Accounts Receivable—More Shine		230
29	Utilities Expense	150	
	Cash		150
30	Bad Debts Expense	3,711	
	Allowance for Bad Debts		3,711
	$3,971 – $260 = $3,711		
30	Interest Expense	197	
	Interest Payable		197
	$30,000 × 12% × 20/365 = $197		

P8-44, cont.
Requirement 1, cont.

	Aging Schedule for Accounts Receivable			
	1-30 Days	31-60 Days	Over 60 Days	Total Balance
Accounts Receivable	$ 7,000	$10,000	$ 5,870	$ 22,870
Percent uncollectible	× 3.0%	× 20.0%	× 30.0%	
Estimated total uncollectible	$ 210	$ 2,000	$ 1,761	$ 3,971 (Target Balance)

Requirement 2

CRYSTAL CLEAR CLEANING Balance Sheet—Partial April 30, 2019		
Assets		
Current Assets:		
Accounts Receivable	$ 22,870	
Less: Allowance for Bad Debts	(3,971)	$ 18,899

Critical Thinking

Tying It All Together Case 8-1

Requirement 1
Accounts Receivable is found on the balance sheet in the current assets section.

Requirement 2
Sears Holdings Corporation's as of January 30, 2016 was $419 million. As of January 31, 2015, Accounts Receivable was $429 million.

Requirement 3
Allowance for Doubtful Accounts were $34 million and $25 million at January 30, 2016 and January 31, 2015, respectively.

Requirement 4
The gross amounts of accounts receivable were $453 million and $454 million at January 30, 2016 and January 31, 2015, respectively.

	As of January 30, 2016	As of January 31, 2015
Accounts Receivable	$ 453	$ 454
Less: Allowance for Doubtful Accounts	(34)	(25)
Net realizable value	$ 419	$ 429

Requirement 5

Allowance for Doubtful Accounts

		25	Jan. 31, 2015, Bal.
Write-offs	1	10	Adj.
		34	Jan. 30, 2016 Bal.

The additions to Allowance for Doubtful Accounts (credit entries) represent the amount of Bad Debts Expense recorded during the year. The deductions from the account (debit entries) represent the amount of Accounts Receivables written off.

Decision Case 8-1

	Actual	New Plan	Expected
Sales Revenue	$ 350,000	× 1.10 =	$ 385,000
Cost of Goods Sold	210,000	× 1.10 =	231,000
Bad Debts Expense	4,000	– 4,000 =	0
Credit Card Expense (200,000 × 2%)			4,000
Other Expenses	61,000	– 5,000 =	56,000
Total Expenses	275,000		291,000
Net Income	$ 75,000		$ 94,000

Sanchez should stop selling on account and start accepting debit and credit cards; it has the potential to increase her net income by $19,000.

Decision Case 8-2
Requirement 1

Bad-debts Expense:	
Allowance method ($150,000 × 0.04)	$6,000
Direct write-off method	3,900
Decrease in net income under allowance method	$2,100

Requirement 2

Accounts Receivable	$ 14,000	
Less: Allowance for Bad Debts	(6,000)	$ 8,000

Pauline's Pottery expects to collect $8,000 if the company uses the percent-of-sales method for the allowance calculation.

Requirement 3

Net income is lower under the allowance method, because you recognize more Bad Debts Expense in the current year. The difference in Bad Debt Expense is $2,100 = $6,000 − $3,900.

Fraud Case 8-1
Requirement 1

Dylan's journal entries should be reviewed by a manager. Employees should not be able to access family accounts. Regular inventory should be taken of the parts, which would have indicated a difference in the account. The company should make sure that all its employees are competent, adequately trained, and able to spot irregularities.

Requirement 2

The parts inventory is overstated by the amount of the past due account. However, Accounts Receivable is understated by the same amount. The net effect of the two misstatements is zero. If the company uses the percent-of-receivables or aging approach to estimate bad debts, then Bad Debts Expense and the Allowance for Bad Debts are probably both understated.

Requirement 3

Small business owners have full discretion to make exceptions to normal procedures as they see fit. These cases often amount to a tradeoff where the owners are willing to take lower profits in order to help their customers. Larger scale companies must have more rigid policies and controls, and would have far fewer discretionary powers.

Financial Statement Case 8-1
Requirement 1

Target Corporation did not report accounts receivable on its balance sheets as of January 30, 2016 or January 31, 2015.

Requirement 2

Target Corporation sold their entire U.S. consumer credit card portfolio to TD Bank Group in March 2013. Target no longer reports the receivables on its financial statements. Sales transactions via Target brand credit cards are therefore considered cash sales, the same as other credit card sales, such as American Express, MasterCard, and Visa.

Financial Statement Case 8-1, cont.
Requirement 3

The advantages to Target of having a third party (TD Bank Group) own and issue Target brand credit cards include:

- Transfer of risk management control
- Transfer of regulatory compliance
- Transfer of customer collection and bad debt expense
- Earning a substantial portion of the profits generated by the credit cards ($641 million, $629 million, and $555 million in 2015, 2014, and 2013, respectively

Target's responsibilities include:

- Account servicing
- Primary marketing functions

Requirement 4

Acid-test ratio = (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities

Jan. 30, 2016 (in millions)
= $4,046 / $12,622
= 0.32

Jan. 31, 2015 (in millions)
= $2,210 / $11,736

= 0.19

The ratio improved from 2015 to 2016. This ratio indicates Target could not pay all current liabilities as of January 30, 2016, or January 31, 2015, if they became due immediately.

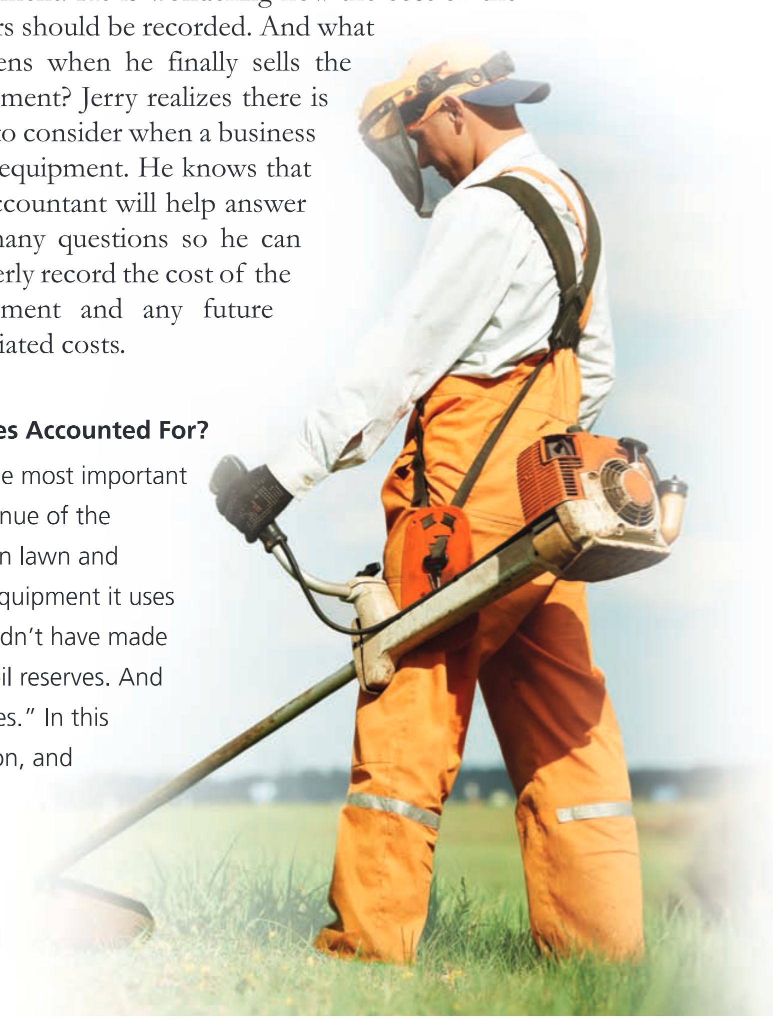
9 Plant Assets, Natural Resources, and Intangibles

What Do I Do with This Equipment?

Jerry Drake has been working hard at a new landscaping business for several months. Things are great—sales are increasing every month, and the customer base is increasing. So far, Jerry has been renting lawn equipment or borrowing equipment from his friends. Jerry is now considering buying several new lawn mowers, trimmers, and leaf blowers.

Jerry is trying to figure out how to record the purchase of these items on his books. Should he expense them all or set up asset accounts for each of the items? Jerry is also considering how long each item will last before he needs to purchase new equipment. He knows that his accountant will ask him about depreciation. She has told him there are several methods he should consider. Jerry knows he wants a depreciation method that will match the cost of the equipment with the revenue that the business earns.

In addition, Jerry plans on keeping the equipment as long as he can, which means that he will be making repairs and maintaining the equipment. He is wondering how the cost of the repairs should be recorded. And what happens when he finally sells the equipment? Jerry realizes there is a lot to consider when a business buys equipment. He knows that his accountant will help answer his many questions so he can properly record the cost of the equipment and any future associated costs.



How Are Plant Assets, Natural Resources, and Intangibles Accounted For?

Plant assets, natural resources, and intangibles are some of the most important assets on the balance sheet. These assets help create the revenue of the business. For example, TruGreen, a company that specializes in lawn and landscape services, wouldn't earn a profit without the lawn equipment it uses to service its customers' lawns. ExxonMobil Corporation wouldn't have made a $16.2 billion profit in 2015 without its natural resource of oil reserves. And we are all familiar with **McDonald's** trademark "golden arches." In this chapter, we discuss how to record the purchase, cost allocation, and disposal of these assets.

Chapter 9 Learning Objectives

1 Measure the cost of property, plant, and equipment

2 Account for depreciation using the straight-line, units-of-production, and double-declining-balance methods

3 Journalize entries for the disposal of plant assets

4 Account for natural resources

5 Account for intangible assets

6 Use the asset turnover ratio to evaluate business performance

7 Journalize entries for the exchange of plant assets (Appendix 9A)

HOW DOES A BUSINESS MEASURE THE COST OF PROPERTY, PLANT, AND EQUIPMENT?

Learning Objective 1
Measure the cost of property, plant, and equipment

Property, plant, and equipment (PP&E) are long-lived, tangible assets used in the operations of a business. Examples include land, buildings, equipment, furniture, and automobiles. Often, property, plant, and equipment are referred to as *plant assets, operational assets*, or *fixed assets* in financial statements. Many businesses use the heading Property, Plant, and Equipment on their classified balance sheets when reporting on these assets. However, the term *plant assets* is commonly used in conversation. We will use the terms interchangeably.

Property, Plant, and Equipment (PP&E)
Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Depreciation
The process by which businesses spread the allocation of a plant asset's cost over its useful life.

Plant assets are unique from other assets, such as office supplies, because plant assets are long term (lasting several years). This requires a business to allocate the cost of the asset over the years that the asset is expected to be used. This allocation of a plant asset's cost over its useful life is called **depreciation** and follows the matching principle. The matching principle ensures that all expenses are matched against the revenues of the period. Because plant assets are used over several years, a business will record a portion of the cost of the asset as an expense in each of those years. All plant assets except land are depreciated. We record no depreciation for land because it does not have a definitive or clearly estimable life, so it is difficult to allocate the cost of land.

Plant assets are used in the operations of the business. This means that they are not specifically acquired for resale, but instead they are used to help create the business's revenue. For example, a business that has a vacant building that is not currently being used would classify this asset as a long-term investment instead of as a plant asset. This is because the vacant building is sitting idle and not currently being used in the operations of the business.

Exhibit 9-1 summarizes the life cycle of a plant asset in a business. The business begins by acquiring the asset and recording the asset on its books. This involves determining the

Exhibit 9-1 | **Life Cycle of a Plant Asset**

1. Acquisition of asset 2. Usage of asset 3. Disposal of asset

asset cost that is reported on the balance sheet. As the business uses the asset, it must record depreciation expense. In addition, the business also incurs additional expenses (such as repairs and maintenance) related to the asset. And lastly, when the asset has reached the end of its useful life, the business disposes of the asset. Each of these stages in the life of a plant asset must be recorded on the business's books.

Cost Principle
A principle that states that acquired assets and services should be recorded at their actual cost.

Plant assets are recorded at historical cost—the amount paid for the asset. This follows the **cost principle**, which states that acquired assets (and services) should be recorded at their actual cost. The *actual cost of a plant asset* is its purchase price plus taxes, purchase commissions, and all other amounts paid to ready the asset for its intended use. Let's begin by reviewing the different categories of plant assets.

Land and Land Improvements

The cost of land includes the following amounts paid by the purchaser:

- Purchase price
- Brokerage commission
- Survey and legal fees
- Delinquent property taxes
- Taxes assessed to transfer the ownership (title) on the land
- Cost of clearing the land and removing unwanted buildings

The cost of land does *not* include the following costs:

- Fencing
- Paving
- Sprinkler systems
- Lighting
- Signs

Land Improvement
A depreciable improvement to land, such as fencing, sprinklers, paving, signs, and lighting.

These separate plant assets (fencing, paving, and so on) are called **land improvements**. Unlike land, land improvements are subject to depreciation.

Suppose Smart Touch Learning needs property and purchases land on August 1, 2019, for $50,000 with a note payable for the same amount. The company also pays cash as follows: $4,000 in delinquent property taxes, $2,000 in transfer taxes, $5,000 to remove an old building, and a $1,000 survey fee. What is the company's cost of this land? Exhibit 9-2 shows all the costs incurred to bring the land to its intended use.

Exhibit 9-2 | **Measuring the Cost of Land**

Purchase price of land		$ 50,000
Add related costs:		
Property taxes	$ 4,000	
Transfer taxes	2,000	
Removal of building	5,000	
Survey fee	1,000	12,000
Total cost of land		$ 62,000

The entry to record the purchase of the land on August 1, 2019, follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Land	62,000	
	Notes Payable		50,000
	Cash		12,000
	To record purchase of land with cash and note payable.		

A↑		L↑	+	E
Land↑ Cash↓	=	Notes Payable↑		

We would say that Smart Touch Learning *capitalized* the cost of the land at $62,000. **Capitalized** means that an asset account was debited (increased) because the company acquired an asset. So, for our land example, Smart Touch Learning debited the Land account for $62,000, the capitalized cost of the asset.

Capitalize
Recording the acquisition of land, building, or other assets by debiting (increasing) an asset account.

Suppose Smart Touch Learning then pays $20,000 for fences, paving, lighting, and signs on August 15, 2019. The following entry records the cost of these land improvements:

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Land Improvements	20,000	
	Cash		20,000
	To record purchase of land improvements for cash.		

A↑↓		L	+	E
Land Improvements↑ Cash↓	=			

Land and land improvements are two entirely separate assets. Recall that land is not depreciated. However, the cost of land improvements *is* depreciated over that asset's useful life.

Buildings

The cost of a building depends on whether the company is constructing the building itself or is buying an existing one. These costs include the following:

Constructing a Building	Purchasing an Existing Building
• Architectural fees • Building permits • Contractor charges • Payments for materials, labor, and miscellaneous costs	• Purchase price • Costs to renovate the building to ready the building for use, which may include any of the charges listed under the "Constructing a Building" column

Machinery and Equipment

The cost of machinery and equipment includes the following:

- Purchase price (less any discounts)
- Transportation charges
- Insurance while in transit
- Sales tax and other taxes
- Purchase commission
- Installation costs
- Testing costs (prior to use of the asset)

After the asset is up and running, the company no longer capitalizes the cost of insurance, taxes, ordinary repairs, and maintenance to the Equipment account. From that point on, insurance, taxes, repairs, and maintenance costs are recorded as expenses.

Furniture and Fixtures

Furniture and fixtures include desks, chairs, file cabinets, display racks, shelving, and so forth. The cost of furniture and fixtures includes the basic cost of each asset (less any discounts), plus all other costs to ready the asset for its intended use. For example, for a desk, this may include the cost to ship the desk to the business and the cost paid to a laborer to assemble the desk.

Lump-Sum Purchase

Relative-Market-Value Method
A method of allocating the total cost (100%) of multiple assets purchased at one time. Total cost is divided among the assets according to their relative market values.

A company may pay a single price for several assets as a group—a lump-sum purchase (sometimes called a *basket purchase*). For example, Smart Touch Learning may pay a single price for land and a building. For accounting purposes, the company must identify the cost of each asset purchased. The total cost paid (100%) is divided among the assets according to their relative market values. This is called the **relative-market-value method**.

Suppose Smart Touch Learning paid a combined purchase price of $100,000 on August 1, 2019, for the land and building. An appraisal indicates that the land's market value is $30,000, and the building's market value is $90,000. It is clear that the company got a good deal, paying less than fair market value, which is $120,000 for the combined assets. But how will the accountant allocate the $100,000 paid for both assets?

First, calculate the ratio of each asset's market value to the total market value for both assets. The total appraised value is $120,000.

$$\begin{aligned}\text{Total market value} &= \text{Land market value} + \text{Building market value}\\ &= \$30{,}000 + \$90{,}000\\ &= \$120{,}000\end{aligned}$$

The land makes up 25% of the total market value and the building 75%, as follows:

$$\begin{aligned}\text{Percentage of total value} &= \text{Land market value / Total market value}\\ &= \$30{,}000 / \$120{,}000\\ &= 25\%\\ \text{Percentage of total value} &= \text{Building market value / Total market value}\\ &= \$90{,}000 / \$120{,}000\\ &= 75\%\end{aligned}$$

For Smart Touch Learning, the land is assigned the cost of $25,000 and the building is assigned the cost of $75,000. The calculations follow:

Asset	Market Value	Percentage of Total Value	×	Total Purchase Price	=	Assigned Cost of Each Asset
Land	$ 30,000	$30,000 / $120,000 = 25%	×	$100,000	=	$ 25,000
Building	90,000	$90,000 / $120,000 = 75%	×	$100,000	=	75,000
Total	$ 120,000	100%				$ 100,000

Suppose the company purchased the assets by signing a note payable. The entry to record the purchase of the land and building is as follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Land	25,000	
	Building	75,000	
	Notes Payable		100,000
	To record purchase of land and building in exchange for note payable.		

A↑	=	L↑	+	E
Land↑ Building↑		Notes Payable↑		

Capital and Revenue Expenditures

Accountants divide spending on plant assets after the acquisition into two categories:

- Capital expenditures
- Revenue expenditures

A **capital expenditure** is debited to an asset account because it increases the asset's capacity or efficiency or extends the asset's useful life. A capital expenditure is also called a *balance sheet expenditure* because the cost of the expenditure is reported on the balance sheet as an asset.

Capital Expenditure
An expenditure that increases the capacity or efficiency of a plant asset or extends its useful life. Capital expenditures are debited to an asset account.

Examples of capital expenditures include the purchase price plus all the other costs to bring an asset to its intended use, as discussed in the preceding sections. Also, an **extraordinary repair** is a capital expenditure because it extends the asset's capacity or useful life. An example of an extraordinary repair would be spending $3,000 to rebuild the engine on a five-year-old truck. This extraordinary repair would extend the asset's life past the normal expected life. As a result, its cost would be debited to the asset account for the truck as follows:

Extraordinary Repair
Repair work that generates a capital expenditure because it extends the asset's life past the normal expected life.

Date	Accounts and Explanation	Debit	Credit
	Truck	3,000	
	Cash		3,000
	To record cost of rebuilding engine on truck.		

A↑↓	=	L	+	E
Truck↑ Cash↓				

Expenses incurred to maintain the asset in working order, such as repair or maintenance expense, are *not* debited to an asset account. Examples include the costs of maintaining equipment, such as repairing the air conditioner on a truck, changing the oil filter, and replacing its tires. These ordinary repairs are called **revenue expenditures** and are debited to an expense account, such as Repairs and Maintenance Expense. Revenue expenditures, often called *income statement expenditures*, do not increase the capacity or efficiency of an asset or extend its useful life and are reported on the income statement as an expense in the period incurred.

Revenue Expenditure
An expenditure that does not increase the capacity or efficiency of an asset or extend its useful life. Revenue expenditures are debited to an expense account.

Suppose that Smart Touch Learning paid $500 cash to replace tires on the truck. This expenditure does not extend the useful life of the truck or increase its efficiency. The company's accounting clerk records this transaction as a revenue expenditure as shown:

Date	Accounts and Explanation	Debit	Credit
	Repairs and Maintenance Expense	500	
	Cash		500
	To record repairs and maintenance costs incurred.		

A↓	=	L	+	E↓
Cash↓				Repairs and Maintenance Expense↑

Exhibit 9-3 shows some capital expenditures and revenue expenditures for a delivery truck.

Exhibit 9-3 | **Delivery Truck Expenditures—Capital Expenditure and Revenue Expenditure**

CAPITAL EXPENDITURE: Debit an Asset Account	REVENUE EXPENDITURE: Debit an Expense Account
Capital Expenditures:	*Revenue Expenditures:*
Major engine or transmission overhaul	Repair of transmission or engine
Modification for new use	Oil change, lubrication, and so on
Addition to storage capacity	Replacement of tires or windshield
Anything that increases the life of the asset	Paint job

Treating a capital expenditure as an expense, or vice versa, creates an accounting error. Suppose a business replaces the engine in the truck. This would be an extraordinary repair because it increases the truck's life. If the company expenses the cost by debiting Repairs and Maintenance Expense rather than capitalizing it (debiting the asset), the company would be making an accounting error. This error has the following effects:

- Overstates Repairs and Maintenance Expense on the income statement
- Understates net income on the income statement
- Understates Retained Earnings (stockholders' equity) on the balance sheet
- Understates the Truck account (asset) on the balance sheet

Incorrectly capitalizing an expense creates the opposite error. Assume a minor repair, such as replacing the water pump on the truck, was incorrectly debited to the asset account. The error would result in expenses being understated and net income being overstated on the income statement. Additionally, the cost of the truck would be overstated on the balance sheet by the amount of the repair bill.

Try It!

1. Budget Banners pays $200,000 cash for a group purchase of land, building, and equipment. At the time of acquisition, the land has a market value of $22,000, the building $187,000, and the equipment $11,000. Journalize the lump-sum purchase.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S9-1 and S9-2. MyAccountingLab

WHAT IS DEPRECIATION, AND HOW IS IT COMPUTED?

Learning Objective 2
Account for depreciation using the straight-line, units-of-production, and double-declining-balance methods

As we learned earlier, depreciation is the allocation of a plant asset's cost to expense over its useful life. Depreciation matches the expense against the revenue generated from using the asset to measure net income.

All assets, except land, wear out as they are used. For example, a business's delivery truck can only go so many miles before it is worn out. As the truck is driven, this use is part of what causes depreciation. Additionally, physical factors, like age and weather, can cause depreciation of assets.

Some assets, such as computers and software, may become *obsolete* before they wear out. An asset is **obsolete** when a newer asset can perform the job more efficiently. As a result, an asset's useful life may be shorter than its physical life. In all cases, the asset's cost is depreciated over its useful life.

Obsolete
An asset is considered obsolete when a newer asset can perform the job more efficiently.

Now that we have discussed causes of depreciation, let's discuss what depreciation is *not*.

1. *Depreciation is not a process of valuation.* Businesses do not record depreciation based on changes in the asset's market value.
2. *Depreciation does not mean that the business sets aside cash to replace an asset when it is used up.* Depreciation has nothing to do with cash.

Factors in Computing Depreciation

Depreciation of a plant asset is based on three main factors:

1. Capitalized cost
2. Estimated useful life
3. Estimated residual value

Capitalized cost is a known cost and, as mentioned earlier in this chapter, includes all items paid for the asset to perform its intended function. The other two factors are estimates.

Estimated **useful life** is how long the company expects it will use the asset. Useful life may be expressed in time, such as months or years, or usage, such as units produced, hours used (for machinery), or miles driven (for a vehicle). A company's useful life estimate might be shorter than the actual life of the asset. For example, a business might estimate a useful life of five years for a delivery truck because it has a policy that after five years the truck will be traded in for a new vehicle. The business knows that the truck will last longer than five years, but the business uses a useful life of only five years because this is how long the company expects to use the asset.

Useful Life
Length of the service period expected from an asset. May be expressed in time or usage.

Useful life is an estimate based on a company's experience and judgment. The goal is to define estimated useful life with the measure (years, units, and so on) that best matches the asset's decline or use. When determining useful life, a company considers how long it will use the asset and when the asset will become obsolete.

Estimated **residual value**, also called *salvage value*, is the asset's expected value at the end of its useful life. When a company decides to dispose of an asset, the company will sell or scrap it. The residual value is the amount the company expects to receive when the company disposes of the asset. Residual value can sometimes be zero if a company does not expect to receive anything when disposing of the asset. If a company plans on trading the asset in for a new asset, the residual value will be the expected trade-in value. Estimated residual value is *not* depreciated because the company expects to receive this amount at the end. Cost minus estimated residual value is called **depreciable cost**.

Residual Value
The expected value of a depreciable asset at the end of its useful life.

Depreciable Cost
The cost of a plant asset minus its estimated residual value.

$$\text{Depreciable cost} = \text{Cost} - \text{Estimated residual value}$$

Depreciation Methods

There are many depreciation methods for plant assets, but three are used most commonly:

1. Straight-line method
2. Units-of-production method
3. Double-declining-balance method

These methods work differently in *how* they derive the yearly depreciation amount, but they all result in the same total depreciation over the total life of the asset. Exhibit 9-4 gives the data we will use for a truck that Smart Touch Learning purchases and places in service on January 1, 2019.

Exhibit 9-4 | Data for Truck

Data Item	Amount
Cost of truck	$ 41,000
Less: Estimated residual value	1,000
Depreciable cost	$ 40,000
Estimated useful life—Years	5 years
Estimated useful life—Units	100,000 miles

Straight-Line Method

Straight-Line Method
A depreciation method that allocates an equal amount of depreciation each year. (Cost − Residual value) / Useful life.

The **straight-line method** allocates an equal amount of depreciation each year and is calculated as follows:

$$\begin{aligned} \text{Straight-line depreciation} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\ &= (\$41{,}000 - \$1{,}000) / 5 \text{ years} \\ &= \$8{,}000 \text{ per year} \end{aligned}$$

Because the asset was placed in service on the first day of the year, the adjusting entry to record each year's depreciation is as follows:

A↓	=	L	+	E↓
Accumulated Depreciation—Truck↑				Depreciation Expense—Truck↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Truck	8,000	
	Accumulated Depreciation—Truck		8,000
	To record depreciation on truck.		

Book Value
A depreciable asset's cost minus accumulated depreciation.

Depreciation Expense is reported on the income statement. Accumulated Depreciation is a contra asset that is reported on the balance sheet following the Truck account. The **book value** of the plant asset, cost minus accumulated depreciation, is reported on the balance sheet at December 31, 2019, as follows:

Property, Plant, and Equipment	
Truck	$ 41,000
Less: Accumulated Depreciation—Truck	(8,000)
Truck, Net	$ 33,000

A straight-line depreciation schedule for this truck is shown in Exhibit 9-5. The final column on the right shows the asset's book value, which is cost less accumulated depreciation. Notice that the depreciation expense amount is the same every year and that the accumulated depreciation is the sum of all depreciation expense recorded to date for the depreciable asset.

Exhibit 9-5 | Straight-Line Depreciation Schedule

		Depreciation for the Year					
Date	Asset Cost	Depreciable Cost	Useful Life		Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2019	$ 41,000						$ 41,000
12-31-2019		($41,000 – $1,000)	/ 5 years	=	$ 8,000	$ 8,000	33,000
12-31-2020		($41,000 – $1,000)	/ 5 years	=	8,000	16,000	25,000
12-31-2021		($41,000 – $1,000)	/ 5 years	=	8,000	24,000	17,000
12-31-2022		($41,000 – $1,000)	/ 5 years	=	8,000	32,000	9,000
12-31-2023		($41,000 – $1,000)	/ 5 years	=	8,000	40,000	$\boxed{1,000}$ Residual value

As an asset is used, accumulated depreciation increases and book value decreases. (See the Accumulated Depreciation and Book Value columns in Exhibit 9-5.) At the end of its estimated useful life, the asset is said to be fully depreciated. An asset's final book value is its residual value ($1,000 in this example).

Units-of-Production Method

The **units-of-production method** allocates a varying amount of depreciation each year based on an asset's usage. Units-of-production depreciates by units rather than by years. As we noted earlier, a unit of output can be miles, units, hours, or output, depending on which unit type best defines the asset's use. When a plant asset's usage varies every year, the units-of-production method does a better of job of matching expenses with revenues.

Units-of-Production Method
A depreciation method that allocates a varying amount of depreciation each year based on an asset's usage.

The truck in our example is estimated to be driven 20,000 miles the first year, 30,000 the second, 25,000 the third, 15,000 the fourth, and 10,000 during the fifth (for a total useful life of 100,000 miles). The units-of-production depreciation for each period varies with the number of units (miles, in the case of the truck) the asset produces. Units-of-production depreciation is calculated as follows:

Step 1:

Depreciation per unit = (Cost − Residual value) / Useful life in units
= ($41,000 − $1,000) / 100,000 miles
= $0.40 per mile

Step 2:

Units-of-production depreciation = Depreciation per unit × Current year usage
= $0.40 per mile × 20,000 miles
= $8,000 (year 1)

Units-of-production depreciation for the truck is illustrated in Exhibit 9-6.

Exhibit 9-6 | Units-of-Production Depreciation Schedule

		Depreciation for the Year						
Date	Asset Cost	Depreciation Per Unit		Number of Units		Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2019	$ 41,000							$ 41,000
12-31-2019		$ 0.40	×	20,000	=	$ 8,000	$ 8,000	33,000
12-31-2020		0.40	×	30,000	=	12,000	20,000	21,000
12-31-2021		0.40	×	25,000	=	10,000	30,000	11,000
12-31-2022		0.40	×	15,000	=	6,000	36,000	5,000
12-31-2023		0.40	×	10,000	=	4,000	40,000	$\boxed{1,000}$ ← Residual value

Double-Declining-Balance Method

Accelerated Depreciation Method
A depreciation method that expenses more of the asset's cost near the start of its useful life and less at the end of its useful life.

Double-Declining-Balance Method
An accelerated depreciation method that computes annual depreciation by multiplying the depreciable asset's decreasing book value by a constant percent that is two times the straight-line depreciation rate.

An **accelerated depreciation method** expenses more of the asset's cost near the start of an asset's life and less at the end of its useful life. The main accelerated method of depreciation is the **double-declining-balance method.** The double-declining-balance method multiplies an asset's decreasing book value (the asset's cost less its accumulated depreciation) by a constant percentage that is twice the straight-line depreciation rate. The straight-line depreciation rate is calculated as 1 / Useful life. Therefore, the double-declining-balance method rate will be 2 × (1 / Useful life). Double-declining-balance amounts can be computed using the following formula:

Double-declining-balance depreciation = (Cost − Accumulated depreciation) × 2 × (1 / Useful life)

For the first year of the truck, the calculation would be as shown:

Double-declining-balance depreciation = (Cost − Accumulated depreciation) × 2 × (1 / Useful life)
= ($41,000 − $0) × 2 × (1 / 5 years)
= $16,400 (Year 1)

In Year 2, the amount of depreciation would decline because the asset has accumulated some depreciation (the $16,400 for the first year). For the second year of the truck, therefore, the calculation would be as shown:

Double-declining-balance depreciation = (Cost − Accumulated depreciation) × 2 × (1 / Useful life)
= ($41,000 − $16,400) × 2 × (1 / 5 years)
= $9,840 (Year 2)

Note that residual value is not included in the formula. Residual value is ignored until the depreciation expense takes the book value below the residual value. When this occurs, the final year depreciation is calculated as the amount needed to bring the asset to its residual value. In the case of the truck, residual value was given at $1,000. In the double-declining-balance schedule in Exhibit 9-7, notice that, after Year 4 (December, 31, 2022), the truck's

book value is $5,314. By definition, the truck is to last five years, which ends on December 31, 2023. At the end of the asset's life, its book value should equal the residual value. Therefore, in the final year, depreciation is book value, $5,314, less the $1,000 residual value, or $4,314 in depreciation expense.

Exhibit 9-7 | **Double-Declining-Balance Depreciation Schedule**

		Depreciation for the Year						
Date	**Asset Cost**	**Book Value**		**DDB Rate**		**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1-1-2019	$ 41,000							$ 41,000
12-31-2019		$41,000	×	2 × (1 / 5 years)	=	$ 16,400	$ 16,400	24,600
12-31-2020		24,600	×	2 × (1 / 5 years)	=	9,840	26,240	14,760
12-31-2021		14,760	×	2 × (1 / 5 years)	=	5,904	32,144	8,856
12-31-2022		8,856	×	2 × (1 / 5 years)	=	3,542	35,686	5,314
12-31-2023						4,314*	40,000	$\boxed{1,000}$ ← Residual value

*Last year depreciation is the "plug figure" needed to reduce book value to the residual amount ($5,314 – $1,000 = $4,314).

Comparing Depreciation Methods

Let's compare the depreciation methods. Annual depreciation expense amounts vary, but total accumulated depreciation is $40,000 for all three methods.

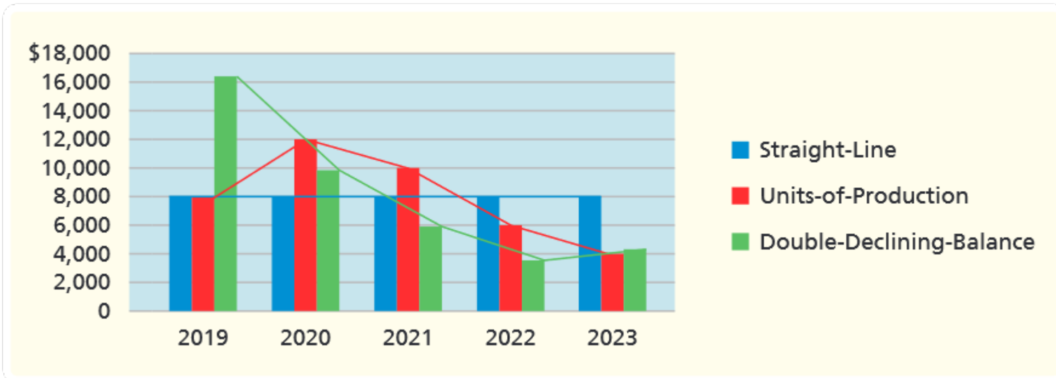
Amount of Depreciation per Year			
			Accelerated Method
Year	**Straight-Line**	**Units-of-Production**	**Double-Declining-Balance**
1	$ 8,000	$ 8,000	$ 16,400
2	8,000	12,000	9,840
3	8,000	10,000	5,904
4	8,000	6,000	3,542
5	8,000	4,000	4,314
Total Accumulated Depreciation	$ 40,000	$ 40,000	$ 40,000

Deciding which method is best depends on the asset. A business should match an asset's expense against the revenue that the asset produces. The following are some guidelines for which method to use:

Method	Asset Characteristics	Effect on Depreciation	Example Assets
Straight-line	Generates revenue evenly over time	Equal amount each period	Building
Units-of-production	Depreciates due to wear and tear rather than obsolescence	More usage causes larger depreciation	Vehicles (miles) Machinery (machine hours)
Double-declining-balance	Produces more revenue in early years	Higher depreciation in early years, less later	Computers

Exhibit 9-8 shows the three methods in one graph for additional comparison. Notice that the straight-line method produces a straight line on the graph because there is an equal amount of depreciation expense each year. The double-declining-balance method produces a line that is decreasing, and the units-of-production method's line varies based on usage.

Exhibit 9-8 | **Annual Depreciation by Method**



DECISIONS

Which depreciation method should be selected?

Three Junes Weaving has just purchased an automated weaving machine and is trying to figure out which depreciation method to use: straight-line, units-of-production, or double-declining-balance. Ira Glasier, the controller, is interested in using a depreciation method that approximates the usage of the weaving machine. He also expects that the weaving machine will have increasing repairs and maintenance as the asset ages. Which method should Ira choose?

Solution

If Ira is interested in using a depreciation method that approximates the usage of the weaving machine, he should use the units-of-production method to depreciate the asset. He could use number of machine hours as the unit of output. This method would best match the usage of the machine to the amount of expense recorded. Ira should be aware, though, that this method could produce varying amounts of depreciation expense each year. For example, if Three Junes Weaving does not use the weaving machine in one year, no depreciation expense would be recorded. This could cause net income to vary significantly from year to year. Because Ira expects the weaving machine to need more repairs as the asset ages, Ira might consider using the double-declining-balance method instead. The double-declining-balance method records a higher amount of depreciation in the early years and less later. This method works well for assets that are expected to have increasing repairs and maintenance in their later years because the total expense (depreciation and repairs and maintenance) can be spread out equally over the life of the asset.

Depreciation for Tax Purposes

Modified Accelerated Cost Recovery System (MACRS) A depreciation method that is used for tax purposes.

The Internal Revenue Service (IRS) requires that companies use a specific depreciation method for tax purposes. This method is the **Modified Accelerated Cost Recovery System (MACRS)**.

Under MACRS, assets are divided into specific classes, such as 3-year, 5-year, 7-year, and 39-year property. Businesses do not get to choose the useful life of the asset. Instead, the IRS specifies the useful life based on the specific classes. For example, office furniture has a 7-year life for tax purposes but might only be depreciated for five years for book purposes.

In addition, the MACRS method ignores residual value. For tax purposes, an asset is fully depreciated to a book value of zero. **MACRS is not acceptable for financial reporting under GAAP**. This requires that businesses record depreciation for plant assets under two methods—book method (straight-line, units-of-production, or double-declining-balance) and tax method (MACRS).

Can the MACRS method be used for financial reporting in accordance with GAAP?

Partial-Year Depreciation

In the previous examples, we calculated depreciation for the entire year. What would happen if the business placed the truck in service on July 1, 2019, instead of January 1, 2019? Would the depreciation for any of the methods change? Yes, but only the methods that are calculated based on a time period, which means only straight-line and double-declining-balance would change. Units-of-production does not consider years in its formula; thus, that calculation remains the same.

When a business purchases an asset during the year (other than January 1), the business should record depreciation for only the portion of the year that the asset was used in the operations of the business. This partial-year depreciation could be calculated to the nearest day, but this is unnecessary. In this book, we will assume a method called *modified half-month convention*, which means if an asset is purchased on or before the 15th of the month, the asset will be depreciated for the whole month. If the asset is purchased after the 15th of the month, the asset will not be depreciated until the following month.

Returning to our example, assume that the truck was placed into service on July 1, 2019. Therefore, the truck was in service for six months in 2019, from July 1 through December 31. The revised straight-line calculation for 2019 under the altered in-service date is as follows:

Straight-line depreciation	= [(Cost − Residual value) / Useful life] × (Number of months / 12 months)
	= [($41,000 − $1,000) / 5 years] × (6 / 12)
	= $4,000

Because the business used the asset for six months of the year, we only record 6/12 (6 out of 12 months) of straight-line depreciation expense, or $4,000, in 2019.

Partial-year depreciation also applies to disposals of assets (which we will cover later in this chapter). If an asset is disposed of during the year, the business must calculate depreciation for only the time period the asset was in service before the asset was disposed, not the entire year.

Changing Estimates of a Depreciable Asset

Estimating the useful life and residual value of a plant asset poses a challenge. As the asset is used, the business may change its estimated useful life or estimated residual value. If this happens, the business must recalculate depreciation expense. For example, the business may find that its truck lasts eight years instead of five. This is a change in estimated useful life. Accounting changes like this are common because useful life and residual value are estimates and, as a result, are not based on perfect foresight. When a company makes an accounting change, Generally Accepted Accounting Principles require the business to recalculate the depreciation for the asset in the year of change and in future periods. They do not require that businesses restate prior years' financial statements for this change in estimate.

For a change in either estimated asset life or residual value, the asset's remaining depreciable book value is spread over the asset's remaining life. Suppose Smart Touch Learning used the truck purchased on January 1, 2019, for two full years. Under the straight-line method, accumulated depreciation would be $16,000. (Refer to Exhibit 9-5.)

Straight-line depreciation = (Cost − Residual value) / Useful life
= ($41,000 − $1,000) / 5 years
= $8,000 per year × 2 years
= $16,000

Remaining depreciable book value (cost *less* accumulated depreciation) is $25,000 ($41,000 – $16,000). Suppose Smart Touch Learning believes the truck will remain useful for six more years (for a total of eight years). Residual value is unchanged. At the start of 2021, the company would recompute depreciation as follows:

Revised depreciation = (Book value − Revised residual value) / Revised useful life remaining
= ($25,000 − $1,000) / 6 years
= $4,000 per year

Make sure to use the useful life remaining as the denominator in the formula.

In years 2021 to 2026, the yearly depreciation entry based on the new useful life would be as follows:

A↓	=	L	+	E↓
Accumulated Depreciation—Truck↑				Depreciation Expense—Truck↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Truck	4,000	
	Accumulated Depreciation—Truck		4,000
	To record depreciation on truck.		

IFRS permits the presentation of plant assets at their fair market value because market value may be more relevant and thus more useful to readers of financial statements.

Reporting Property, Plant, and Equipment

Property, plant, and equipment are reported at book value on the balance sheet. Companies may choose to report plant assets as a single amount, with a note to the financial statements that provides detailed information, or companies may provide detailed information on the face of the statement. The cost of the asset and the related accumulated depreciation should be disclosed. Exhibit 9-9 shows the two alternative reporting treatments for plant assets.

Exhibit 9-9 | **Reporting Property, Plant, and Equipment**

Treatment 1: Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning (December 31)		
Property, Plant, and Equipment:		
Land		$ 20,000
Building	$ 60,000	
Less: Accumulated Depreciation—Building	(250)	59,750
Furniture	18,000	
Less: Accumulated Depreciation—Furniture	(300)	17,700
Property, Plant, and Equipment, Net		$ 97,450

Treatment 2: Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning (December 31)	
Property, Plant, and Equipment, Net (See Note 8)	$ 97,450

Try It!

2. On January 1, Alamo Cranes purchased a crane for $140,000. Alamo expects the crane to remain useful for six years (1,000,000 lifts) and to have a residual value of $2,000. The company expects the crane to be used for 80,000 lifts the first year.

Compute the first-year depreciation expense on the crane using the following methods:

a. Straight-line
b. Units-of-production (Round *depreciation per unit* to two decimals. Round depreciation expense to the nearest whole dollar.)

Compute the first-year and second-year depreciation expense on the crane using the following method:

c. Double-declining-balance (Round depreciation expense to the nearest whole dollar.)

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S9-3 through S9-6. MyAccountingLab

HOW ARE DISPOSALS OF PLANT ASSETS RECORDED?

Learning Objective 3
Journalize entries for the disposal of plant assets

Eventually, an asset wears out or becomes obsolete. The business then has several options regarding property, plant and equipment:

- Discard the plant asset.
- Sell the plant asset.
- Exchange the plant asset for another plant asset.

In this section, we discuss the first two options. Exchanging a plant asset for another asset is covered in the appendix to this chapter (Appendix 9A).

Plant assets remain on the business's books until they are disposed of. For example, a fully depreciated asset, one that has reached the end of its estimated useful life and is still in service, will still be reported as an asset on the balance sheet. If the asset is still useful, the company may continue using it even though no additional depreciation is recorded. If the asset is no longer useful, it is disposed of. This requires the business to remove the asset and associated accumulated depreciation from the books. In addition, a gain or loss might be recognized by the company.

Regardless of the type of disposal, there are four steps:

1. Bring the depreciation up to date.
2. Remove the old, disposed-of asset and associated accumulated depreciation from the books.
3. Record the value of any cash received (or paid) in the disposal of the asset.
4. Finally, determine the amount of any gain or loss. Gain or loss is determined by comparing the cash received and the market value of any other assets received with the book value of the asset disposed of.

Discarding Plant Assets

Discarding of plant assets involves disposing of the asset for no cash. If an asset is disposed of when it is fully depreciated and has no residual value, then the business simply removes the asset and contra asset, Accumulated Depreciation, from the books (Step 2). There is no need to bring the depreciation up to date (Step 1) because the asset is already fully depreciated. In addition, no cash was received or paid and no gain or loss is recognized (Steps 3 and 4).

For example, assume that on July 1, Smart Touch Learning discards equipment with a cost of $10,000 and accumulated depreciation of $10,000. The asset and contra asset accounts are shown below before disposal.

Equipment

Debit	Credit
10,000	

Accumulated Depreciation—Equipment

Debit	Credit
	10,000

To dispose of the equipment, Smart Touch Learning will need to credit the asset account, Equipment, and debit Accumulated Depreciation—Equipment. The accounting clerk will record the transaction as follows:

A↑↓		L + E
Equipment↓ Accumulated Depreciation—Equipment↓	=	

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Accumulated Depreciation—Equipment	10,000	
	Equipment		10,000
	Discarded fully depreciated equipment.		

Equipment

	Debit	Credit	
	10,000	10,000	July 1
Bal.	0		

Accumulated Depreciation—Equipment

	Debit	Credit	
July 1	10,000	10,000	
		0	Bal.

After disposal, notice that the Equipment and Accumulated Depreciation–Equipment accounts now have a zero balance. These accounts will no longer be reported on the financial statements because Smart Touch Learning no longer owns the equipment.

Suppose, instead, that on July 1, Smart Touch Learning discarded the equipment, which has a cost of $10,000 but it is not fully depreciated. As of December 31 of the previous year, accumulated depreciation was $8,000. Annual depreciation expense is $1,000 per year.

The first step in recording the disposal is to bring the asset up to date on depreciation. Because Smart Touch Learning disposes of the asset on July 1 and the asset was in service from January 1 through July 1 since the last recording of depreciation, one-half of a year's depreciation will be recorded ($1,000 × 1/2 = $500) as follows:

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Depreciation Expense—Equipment	500	
	Accumulated Depreciation—Equipment		500
	To record depreciation on equipment.		

A↓	=	L	+	E↓
Accumulated Depreciation—Equipment↑				Depreciation Expense—Equipment↑

Steps 2 through 4 involve recording the disposal of the equipment and accumulated depreciation and calculating any gain or loss. In this situation, there is a $1,500 loss calculated as follows:

Market value of assets received		$ 0
Less: Book value of asset disposed of:		
Cost	$ 10,000	
Less: Accumulated Depreciation ($8,000 + $500)	(8,500)	1,500
Gain or (Loss)		$ (1,500)

When calculating gain or loss, don't forget to update the Accumulated Depreciation account. In this example, before recording depreciation, the Accumulated Depreciation account was $8,000; $500 of additional depreciation was recorded at disposal, bringing the total accumulated depreciation to $8,500.

The account, Loss on Disposal, will be used. This account has a normal debit balance and is reported in the Other Income and (Expenses) section of the income statement which includes gains and losses on the sale of plant assets.

Smart Touch Learning records the following entry to dispose of the equipment:

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Accumulated Depreciation—Equipment	8,500	
	Loss on Disposal	1,500	
	Equipment		10,000
	Discarded equipment with a book value of $1,500.		

A↓	=	L	+	E↓
Equipment↓ Accumulated Depreciation—Equipment↓				Loss on Disposal↑

Equipment

	Debit	Credit	
	10,000	10,000	July 1
Bal.	0		

Accumulated Depreciation—Equipment

	Debit	Credit	
		8,000	
July 1	8,500	500	July 1
		0	Bal.

Loss on Disposal

	Debit	Credit
July 1	1,500	

Selling Plant Assets

Companies will often sell a plant asset for cash. We will again use Smart Touch Learning as an example. On July 1, the company sells equipment with a historical cost of $10,000 and accumulated depreciation, as of December 31 of the previous year, of $8,000. Annual depreciation is $1,000. The first step is to bring the depreciation up to date for the six months from the last recording of depreciation through the date of disposal.

A↓	=	L	+	E↓
Accumulated Depreciation—Equipment↑				Depreciation Expense—Equipment↑

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Depreciation Expense—Equipment	500	
	Accumulated Depreciation—Equipment		500
	To record depreciation on equipment.		

This entry brings the accumulated depreciation to $8,500 ($8,000 + $500). The equipment now has a book value of $1,500 ($10,000 − $8,500). Now that we have recorded Step 1, let's look at Steps 2 through 4 for several different scenarios.

Selling a Plant Asset at Book Value

Suppose that Smart Touch Learning sells the equipment for $1,500. Notice that the cash received is equal to the book value of the asset. When a business sells an asset for book value, no gain or loss is recorded. This is because the cash received is equal to the book value of the asset sold.

Market value of assets received		$ 1,500
Less: Book value of asset disposed of:		
Cost	$ 10,000	
Less: Accumulated Depreciation	(8,500)	1,500
Gain or (Loss)		$ 0

In recording the journal entry, Smart Touch Learning will debit cash for $1,500 and then take the equipment and accumulated depreciation off the books as follows:

A↑↓	=	L	+	E
Cash↑ Equipment↓ Accumulated Depreciation—Equipment↓				

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	1,500	
	Accumulated Depreciation—Equipment	8,500	
	Equipment		10,000
	Sold equipment for cash.		

Cash

	Debit	Credit	
July 1	1,500		

Equipment

	Debit	Credit	
	10,000	10,000	July 1
Bal.	0		

Accumulated Depreciation—Equipment

	Debit	Credit	
		8,000	
July 1	8,500	500	July 1
		0	Bal.

Selling a Plant Asset Above Book Value

If Smart Touch Learning sells the equipment for $4,000, the company will record a gain on sale of the equipment. Notice that the cash received is more than the book value of the asset. When a business sells an asset for more than its book value, a gain is recorded.

Market value of assets received		$ 4,000
Less: Book value of asset disposed of:		
Cost	$ 10,000	
Less: Accumulated Depreciation	(8,500)	1,500
Gain or (Loss)		$ 2,500

The account, Gain on Disposal, will be used. This account has a normal credit balance and is reported in the Other Income and (Expenses) section of the income statement.

In recording the journal entry, Smart Touch Learning will remove the old equipment and accumulated depreciation from the books (Step 2), record a debit to Cash for $4,000 (Step 3), and then record a credit to Gain on Disposal (Step 4) as follows:

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	4,000	
	Accumulated Depreciation—Equipment	8,500	
	Equipment		10,000
	Gain on Disposal		2,500
	Sold equipment for cash.		

A↑		L	+	E↑
Cash↑ Equipment↓ Accumulated Depreciation—Equipment↓	=			Gain on Disposal↑

After you have recorded the transaction for disposal of plant assets, it's always a good idea to check that debits equal credits in the journal entry.

Cash

July 1	4,000		

Equipment

	10,000	10,000	July 1
Bal.	0		

Accumulated Depreciation—Equipment

		8,000	
July 1	8,500	500	July 1
		0	Bal.

Gain on Disposal

		2,500	July 1

Selling a Plant Asset Below Book Value

If Smart Touch Learning sells the equipment for $500, the company will record a loss on the sale of the equipment. Notice that the cash received is less than the book value of the asset. When a business sells an asset for less than its book value, a loss is recorded.

Market value of assets received		$ 500
Less: Book value of asset disposed of:		
Cost	$ 10,000	
Less: Accumulated Depreciation	(8,500)	1,500
Gain or (Loss)		$ (1,000)

In recording the journal entry, Smart Touch Learning will remove the old equipment and accumulated depreciation from the books (Step 2), record a debit to Cash for $500 (Step 3), and then record a debit to Loss on Disposal (Step 4) as follows:

A↓	=	L	+	E↓
Cash↑ Equipment↓ Accumulated Depreciation—Equipment↓				Loss on Disposal↑

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	500	
	Accumulated Depreciation—Equipment	8,500	
	Loss on Disposal	1,000	
	Equipment		10,000
	Sold equipment for cash.		

Cash

July 1	500		

Loss on Disposal

July 1	1,000		

Equipment

	10,000	10,000	July 1
Bal.	0		

Accumulated Depreciation—Equipment

		8,000	
July 1	8,500	500	July 1
		0	Bal.

Summary

In each disposal illustrated, the company has decreased net income over the life of the asset by recording depreciation expense each year prior to the disposal. When the company records the disposal, the company will record a gain, a loss, or neither. Gains recorded at disposal increase net income and losses recorded at disposal decrease net income. Over the life of the asset, the company records a net decrease in net income equal to the net cost of the asset. The net cost of the asset is the amount paid for the asset when it was purchased less the cash received at disposal. For each scenario, let's compare the effect on net income to the net cost, as shown in the table below:

	Asset Discarded		Asset Sold		
	Fully Depreciated	Not Fully Depreciated	At Book Value	Above Book Value	Below Book Value
Accumulated depreciation	$ 10,000	$ 8,500	$ 8,500	$ 8,500	$ 8,500
Plus: Loss on disposal	0	1,500	0	0	1,000
Less: Gain on disposal	0	0	0	2,500	0
Net decrease in net income	$ 10,000	$ 10,000	$ 8,500	$ 6,000	$ 9,500
Cost	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000
Less: Cash received at disposal	0	0	1,500	4,000	500
Net cost	$ 10,000	$ 10,000	$ 8,500	$ 6,000	$ 9,500

Notice in each case that the net decrease in net income is equal to the net cost of the asset. We have, in effect, expensed the net cost of the asset over its life.

In this section, we have also reviewed the journal entries for discarding and selling of plant assets. Exhibit 9-10 (on the next page) summarizes what you have learned. Before moving on, take a moment to review the exhibit.

Exhibit 9-10 | **Disposals of Plant Assets**

Discarding of a fully depreciated plant asset:

Date	Accounts and Explanation	Debit	Credit
	Accumulated Depreciation	10,000	
	Plant Asset		10,000

Discarding of a plant asset that is not fully depreciated:

Date	Accounts and Explanation	Debit	Credit
	Accumulated Depreciation	8,500	
	Loss on Disposal	1,500	
	Plant Asset		10,000

Selling a plant asset at book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	1,500	
	Accumulated Depreciation	8,500	
	Plant Asset		10,000

Selling a plant asset above book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	4,000	
	Accumulated Depreciation	8,500	
	Plant Asset		10,000
	Gain on Disposal		2,500

Selling a plant asset below book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	500	
	Accumulated Depreciation	8,500	
	Loss on Disposal	1,000	
	Plant Asset		10,000

Try It!

3. Counselors of Atlanta purchased equipment on January 1, 2017, for $20,000. Counselors of Atlanta expected the equipment to last for four years and have a residual value of $2,000. Suppose Counselors of Atlanta sold the equipment for $8,000 on December 31, 2019, after using the equipment for three full years. Assume depreciation for 2019 has been recorded. Journalize the sale of the equipment, assuming straight-line depreciation was used.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S9-7 through S9-10. MyAccountingLab

HOW ARE NATURAL RESOURCES ACCOUNTED FOR?

Learning Objective 4
Account for natural resources

Natural Resource
An asset that comes from the earth and is consumed.

Depletion
The process by which businesses spread the allocation of a natural resource's cost over its usage.

Natural resources are assets that come from the earth that are consumed. Examples include iron ore, oil, natural gas, diamonds, gold, coal, and timber. Natural resources are expensed through depletion. **Depletion** is the process by which businesses spread the allocation of a natural resource's cost to expense over its usage. It's called depletion because the company is depleting (using up) a natural resource such that at some point in time, there is nothing left to extract. Depletion expense is computed by the units-of-production method.

For example, an oil well cost $700,000 and is estimated to hold 70,000 barrels of oil. There is no residual value. If 3,000 barrels are extracted and sold during the year, then depletion expense is calculated as follows:

Step 1:

Depletion per unit = (Cost − Residual value) / Estimated total units
= ($700,000 − $0) / 70,000 barrels
= $10 per barrel

Step 2:

Depletion expense = Depletion per unit × Number of units extracted
= $10 per barrel × 3,000 barrels
= $30,000 (Year 1)

The depletion entry for the year is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depletion Expense—Oil Reserves	30,000	
	Accumulated Depletion—Oil Reserves		30,000
	To record depletion.		

A↓	=	L	+	E↓
Accumulated Depletion—Oil Reserves↑				Depletion Expense—Oil Reserves↑

Accumulated Depletion is a contra asset account similar to Accumulated Depreciation. Natural resources can be reported on the balance sheet as shown for oil reserves in the following example:

Oil Reserves	$ 700,000	
Less: Accumulated Depletion—Oil Reserves	(30,000)	$ 670,000

Try It!

4. Amplify Petroleum holds huge reserves of oil. Assume that at the end of 2017, Amplify Petroleum's cost of oil reserves totaled $80,000,000, representing 100,000,000 barrels of oil. Suppose Amplify Petroleum removed and sold 20,000,000 barrels of oil during 2018. Journalize depletion expense for 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S9-11. MyAccountingLab

HOW ARE INTANGIBLE ASSETS ACCOUNTED FOR?

Learning Objective 5
Account for intangible assets

Intangible Asset
An asset with no physical form that is valuable because of the special rights it carries.

Intangible assets are assets that have no physical form. Instead, these assets convey special rights from patents, copyrights, trademarks, and other creative works.

In our technology-driven economy, intangibles are very important. The intellectual property of a business is difficult to measure. However, when one company buys another, we get a glimpse of the value of the intellectual property of the acquired company. For example, in 2006, Google acquired YouTube. Google said it would pay $1.65 billion for YouTube even though YouTube had never had a profitable year. Why so much for so little? Because YouTube's intangible assets were extremely valuable. Intangibles can account for most of a company's market value, so companies must value their intangibles just as they value other assets, such as merchandise inventory and equipment.

Accounting for Intangibles

Amortization
The process by which businesses spread the allocation of an intangible asset's cost over its useful life.

Impairment
A permanent decline in asset value.

Intangible assets that are purchased are recorded at cost. If an intangible is not purchased, only some limited costs can be capitalized. Most purchased intangibles are expensed through **amortization**, the allocation of the cost of an intangible asset to expense over its useful life. Amortization applies to intangibles exactly as depreciation applies to equipment and depletion to oil and timber.

Intangibles either have a definite life or an indefinite life. Intangibles with an indefinite life have no factors (such as legal and contractual obligations) that limit the usage of the intangible asset. Only intangibles that have a definite life are amortized. Intangible assets with an indefinite life are tested for impairment annually. **Impairment** occurs when the fair value of an asset is less than the book value. In other words, there has been a permanent decline in the value of the asset. If an impairment occurs, the company records a loss in the period that the decline is identified.

Specific Intangibles

As noted earlier, patents, copyrights, and trademarks are intangible assets. The accounting for the purchase and amortization of each asset is similar.

Patents

Patent
An intangible asset that is a federal government grant conveying an exclusive 20-year right to produce and sell a process, product, or formula.

A **patent** is an intangible asset that is a federal government grant conveying an exclusive 20-year right to produce and sell an invention. The invention may be a process, product, or formula—for example, the Dolby noise-reduction process or a prescription drug formula. The acquisition cost of a patent is debited to the Patent account.

Like any other asset, a patent may be purchased. Suppose Smart Touch Learning pays $200,000 to acquire a patent on January 1. The accounting clerk records the following entry at acquisition:

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Patent	200,000	
	Cash		200,000
	To record purchase of patent.		

A↑↓	=	L	+	E
Patent↑ Cash↓				

Smart Touch Learning believes this patent's useful life is only five years because it is likely that a new, more efficient process will be developed within that time. Amortization expense is calculated using the straight-line method as follows:

$$\begin{aligned} \text{Amortization expense} &= (\text{Cost} - \text{Residual value}) \,/\, \text{Useful life} \\ &= (\$200{,}000 - \$0) \,/\, 5 \text{ years} \\ &= \$40{,}000 \text{ per year} \end{aligned}$$

For most intangibles, the residual value will be zero.

The company's accounting clerk would record the following adjusting entry for amortization:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Amortization Expense—Patent	40,000	
	Patent		40,000
	To record amortization of patent.		

A↓	=	L	+	E↓
Patent↓				Amortization Expense—Patent↑

Notice that Smart Touch Learning credited the amortization directly to the intangible asset, Patent, instead of using an Accumulated Amortization account. A company may credit an intangible asset directly when recording amortization expense, or it may use the account Accumulated Amortization. **Companies frequently choose to credit the asset account directly because the residual value is generally zero and there is no physical asset to dispose of at the end of its useful life, so the asset essentially removes itself from the books through the process of amortization.**

At the end of the first year, Smart Touch Learning will report this patent at $160,000 ($200,000 cost minus first-year amortization of $40,000), the next year at $120,000, and so forth. Each year for five years the value of the patent will be reduced until the end of its five-year life, at which point its book value will be $0.

Why was the account Patent credited instead of Accumulated Amortization—Patent?

Copyrights and Trademarks

A **copyright** is the exclusive right to reproduce and sell a book, musical composition, film, other work of art, or intellectual property. Copyrights also protect computer software programs, such as Microsoft® Windows® and the Microsoft® Excel® spreadsheet software. Issued by the federal government, a copyright is granted for the life of the creator plus 70 years.

Copyright
Exclusive right to reproduce and sell a book, musical composition, film, other work of art, or intellectual property.

A company may pay a large sum to purchase an existing copyright. For example, the publisher Simon & Schuster may pay $1 million for the copyright on a popular novel because it thinks it will be able to profit from selling the novel. Even though copyrights have a long legal life (life of creator plus 70 years), most copyrights have short useful lives. Copyrights are amortized over their legal life or useful life, whichever is shorter.

Trademark
An asset that represents distinctive identifications of a product or service.

A **trademark** (also called *trade name*) is an asset that represents distinctive identifications of products or services, such as the Nike "swoosh" or the McDonald's "golden arches." Legally protected slogans include Chevrolet's "Like a Rock" and De Beers's "A Diamond Is Forever." The cost of a trademark or trade name is amortized over its useful life.

Franchises and Licenses

Franchise
Privilege granted by a business to sell a product or service under specified conditions.

License
Privilege granted by a government to use public property in performing services.

Franchises are privileges granted by a business to sell goods or services under specified conditions. The Dallas Cowboys football organization is a franchise granted by the National Football League. McDonald's and Subway are well-known business franchises. **Licenses** are privileges granted by a government to use public property in performing services. A radio station might be granted permission by the federal government to use the airwaves to broadcast its music. The acquisition cost of a franchise or license is amortized over its useful life.

Goodwill

Goodwill
Excess of the cost of an acquired company over the sum of the market values of its net assets (assets minus liabilities).

In accounting, **goodwill** is the excess of the cost to purchase another company over the market value of its net assets (assets minus liabilities). Goodwill is the value paid above the net worth of the company's assets and liabilities.

Suppose White Corporation acquired Mocha, Inc. on January 1, 2018. The sum of the market values of Mocha's assets was $9 million and its liabilities totaled $1 million, so Mocha's net assets totaled $8 million. Suppose White paid $10 million to purchase Mocha. In this case, White paid $2 million above the market value of Mocha's net assets. Therefore, that $2 million is considered goodwill and is computed as follows:

Purchase price to acquire Mocha		$ 10,000,000
Market value of Mocha's assets	$ 9,000,000	
Less: Market value of Mocha's liabilities	(1,000,000)	
Less: Market value of Mocha's net assets		8,000,000
Goodwill		$ 2,000,000

White's entry to record the purchase of Mocha, including the goodwill that White purchased, would be as follows:

A↑	=	L↑	+	E
Assets↑ Goodwill↑ Cash↓	=	Liabilities↑		

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Assets	9,000,000	
	Goodwill	2,000,000	
	Liabilities		1,000,000
	Cash		10,000,000
	To record purchase of Mocha Company.		

Goodwill has some special features:

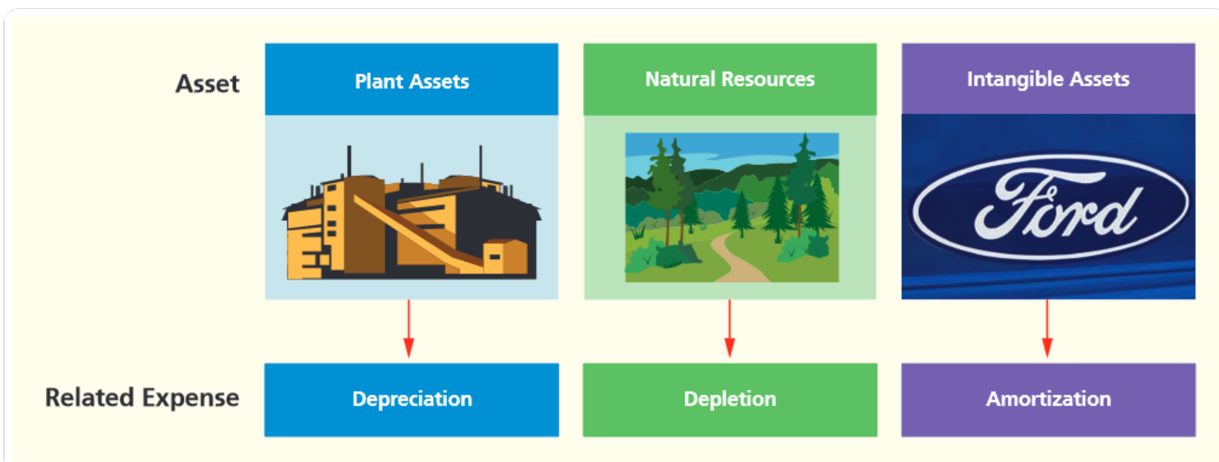
- Goodwill is recorded only by an acquiring company when it purchases another company and pays more for that company than the market value of the net assets acquired (as in our entry above where White purchased Mocha for $2 million more than the market value of Mocha's net assets). An outstanding reputation may create goodwill, but that company never records goodwill for its own business.
- According to Generally Accepted Accounting Principles (GAAP), goodwill is *not* amortized. Instead, the acquiring company measures the fair value of its acquired goodwill each year. If the goodwill has increased in fair value, there is nothing to record. But if goodwill's fair value has decreased, then the company records an impairment loss and writes the goodwill down by debiting (increasing) the Impairment Loss on Goodwill account and crediting (decreasing) the Goodwill account.

Reporting of Intangible Assets

Intangible assets are reported on the balance sheet similarly to plant assets. If a company uses the contra account, Accumulated Amortization, this account is not typically shown on the balance sheet. Instead, intangible assets are shown only at their net book value. Amortization expense is reported on the income statement as part of operations.

Exhibit 9-11 summarizes our coverage of plant assets, natural resources, and intangibles. Remember that plant assets are those assets that have physical characteristics and are used in operations. Natural resources are assets that come from the physical earth and can be ultimately used up, and intangible assets are assets whose value is not derived from their physical substance.

Exhibit 9-11 | **Assets and Their Related Expenses**



TYING IT ALL TOGETHER

Most of us, at one time or another, have visited a McDonald's. Widely known for its "golden arches," **McDonald's Corporation** is the world's leading global food service retailer with more than 36,000 locations worldwide in more than 100 countries. The corporation operates and franchises McDonald's restaurants, which serve menu items such as the Big Mac, Chicken McNuggets, and McFlurry desserts. In addition, McDonald's also serves McCafe beverages and pastries.

Would McDonald's Corporation report plant assets on its financial statements?

Yes, McDonald's Corporation reports plant assets including buildings, leasehold improvements, and equipment on its balance sheet. The corporation owns real estate in connection with its restaurants and in many cases owns the building. In addition, McDonald's owns the equipment inside restaurants such as the fryers, ovens, and tables.

How do franchises affect McDonald's Corporation?

In addition to owning McDonald's restaurants, the company also franchises restaurants. Approximately 80% of McDonald's restaurants are owned and operated by independent franchisees. When an individual franchises a McDonald's restaurant, the franchisee maintains control over personnel, purchasing, marketing, and pricing decisions while still benefiting from McDonald's global brand. Under a conventional franchise arrangement, McDonald's Corporation owns the land and building. The franchisee purchases the equipment, signs, seating, and décor.

Try It!

5. On January 1, Orange Manufacturing paid $40,000 for a patent. Although it gives legal protection for 20 years, the patent is expected to provide a competitive advantage for only eight years. Assuming the straight-line method of amortization, record the journal entry for amortization for Year 1.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S9-12 and S9-13. MyAccountingLab

HOW DO WE USE THE ASSET TURNOVER RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6
Use the asset turnover ratio to evaluate business performance

Asset Turnover Ratio
Measures how efficiently a business uses its average total assets to generate sales. Net sales revenue / Average total assets.

The **asset turnover ratio** measures the amount of net sales revenue generated for each average dollar of total assets invested. This ratio measures how well a company is using its assets to generate net sales revenue. To compute this ratio, we divide net sales revenue by average total assets. Using net sales revenue and total assets (in millions) from **Kohl's Corporation's** 2015 Annual Report (see http://www.pearsonhighered.com/Horngren for a link to the 2015 Annual Report), we can calculate the asset turnover ratio.

	January 30, 2016	January 31, 2015
Net sales revenue	$ 19,204	$ 19,023
Total assets	13,606	14,333

Asset turnover ratio = Net sales revenue / Average total assets
= $19,204 / [($13,606 + $14,333) / 2]
= 1.37 times (rounded)

Suppose that the asset turnover ratio for the industry is 1.9 times. Kohl's asset turnover ratio of 1.37 times is significantly lower than the industry average. This tells us that Kohl's is only producing $1.37 of net sales revenue for each dollar ($1.00) of assets invested while the average company in this industry is producing $1.90 in net sales revenue for every dollar invested in assets. Kohl's should evaluate ways to improve its efficiency and increase its asset turnover ratio, such as increasing net sales revenue or decreasing average total assets. A high asset turnover ratio is desirable.

Try It!

6. Maxim Company reported beginning and ending total assets of $140,000 and $160,000, respectively. Its net sales revenue for the year was $240,000. What was Maxim's asset turnover ratio?

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S9-14. MyAccountingLab

APPENDIX 9A: Exchanging Plant Assets

HOW ARE EXCHANGES OF PLANT ASSETS ACCOUNTED FOR?

Learning Objective 7
Journalize entries for the exchange of plant assets

Earlier in the chapter, we discussed ways that businesses could dispose of plant assets. One way is for a business to exchange a plant asset for another plant asset. In this section, we evaluate how to account for exchanges that have *commercial substance*. An exchange has **commercial substance** if the future cash flows change as a result of the transaction. In other words, an exchange has commercial substance if, in the future, cash flows (receipts of revenue or payment of expenses) of the business will change because of the exchange. For example, exchanging an older asset for a new asset will increase productivity, thereby creating more revenue for the business. Therefore, this exchange has commercial substance.

Commercial Substance
A characteristic of a transaction that causes a change in future cash flows.

Exchanges that have commercial substance require any gain or loss on the transaction to be recognized. The old asset will be removed from the books, and the new asset will be recorded at its market value. Exchanges that lack commercial substance ignore any gain or loss on the transaction, except in limited situations. The new asset is recorded at the old asset's book value plus cash paid and minus cash received instead of at market value.

Exchange of Plant Assets—Gain Situation

Suppose that on December 31, Smart Touch Learning exchanges used equipment for new equipment. The old equipment has a historical cost of $10,000 and accumulated depreciation of $9,000. Its current book value is $1,000 ($10,000 − $9,000). The company acquires the new equipment with a market value of $8,000 and pays cash of $2,000. Assuming this exchange has commercial substance, the gain will be calculated as follows:

Market value of assets received		$ 8,000
Less:		
Book value of asset exchanged	$ 1,000	
Cash paid	2,000	3,000
Gain or (Loss)		$ 5,000

The accounting clerk records the following entry:

A↑	=	L	+	E↑
Equipment (new)↑ Accumulated Depreciation—Equipment↓ Equipment (old)↓ Cash↓	=			Gain on Disposal↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Equipment (new)	8,000	
	Accumulated Depreciation—Equipment	9,000	
	Equipment (old)		10,000
	Cash		2,000
	Gain on Disposal		5,000
	Exchanged old equipment and cash for new equipment.		

Cash

		2,000	Dec. 31

Equipment (new)

Dec. 31	8,000		

Equipment (old)

	10,000	10,000	Dec. 31
Bal.	0		

Accumulated Depreciation—Equipment

		9,000	
Dec. 31	9,000		
		0	Bal.

Gain on Disposal

		5,000	Dec. 31

Exchange of Plant Assets—Loss Situation

Suppose instead that on December 31, Smart Touch Learning exchanges used equipment for new equipment. The old equipment has a historical cost of $10,000 and accumulated depreciation of $9,000. Its current book value is $1,000 ($10,000 − $9,000). The company acquires the new equipment with a market value of $3,000 and pays cash of $2,500. Assuming this exchange has commercial substance, the loss will be calculated as follows:

Market value of assets received		$ 3,000
Less:		
Book value of asset exchanged	$ 1,000	
Cash paid	2,500	3,500
Gain or (Loss)		$ (500)

The accounting clerk records the following entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Equipment (new)	3,000	
	Accumulated Depreciation—Equipment	9,000	
	Loss on Disposal	500	
	Equipment (old)		10,000
	Cash		2,500
	Exchanged old equipment and cash for new equipment.		

A↓	=	L	+	E↓
Equipment (new)↑ Accumulated Depreciation—Equipment↓ Equipment (old)↓ Cash↓	=		+	Loss on Disposal↑

Cash

		2,500	Dec. 31

Equipment (new)

Dec. 31	3,000		

Equipment (old)

	10,000	10,000	Dec. 31
Bal.	0		

Accumulated Depreciation—Equipment

		9,000	
Dec. 31	9,000		
		0	Bal.

Loss on Disposal

Dec. 31	500		

Try It!

7A. Arca Salvage, Inc. purchased equipment for $10,000. Arca recorded total depreciation of $8,000 on the equipment. Assume that Arca exchanged the old equipment for new equipment, paying $4,000 cash. The fair market value of the new equipment is $5,000. Journalize Arca's exchange of equipment. Assume this exchange has commercial substance.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S9A-15 and S9A-16. MyAccountingLab

REVIEW

> Things You Should Know

1. How does a business measure the cost of property, plant, and equipment?

- Property, plant, and equipment are long-lived, tangible assets used in the operations of a business. They are commonly referred to as plant assets.
- Plant assets are recorded at historical cost—the amount paid for the asset. This includes the purchase price plus taxes, purchase commissions, and all other amounts paid to ready the asset for its intended use.

- A lump-sum purchase involves paying a single price for multiple assets. The cost of each asset purchased must be identified based on the relative-market-value method.
- Two additional types of expenditures are often incurred on plant assets:
  - Capital expenditures—debited to an asset account because they increase the asset's capacity or efficiency or extends the asset's useful life
  - Revenue expenditures—debited to an expense account, such as Repairs and Maintenance Expense, because they are incurred to maintain the asset in working order

2. What is depreciation, and how is it computed?

- Depreciation is the allocation of a plant asset's cost to expense over its useful life.
- Three common depreciation methods are:
  - Straight-line method—allocates an equal amount of depreciation to each year
  - Units-of-production method—allocates a varying amount of depreciation each year based on an asset's usage
  - Double-declining-balance method—an accelerated depreciation method that computes annual depreciation by multiplying the depreciable asset's book value by a constant percent that is two times the straight-line rate
- Modified Accelerated Cost Recovery System (MACRS) is used for tax purposes.
- Occasionally a business may change its estimated residual value or estimated useful life of a depreciable asset. This change requires depreciation to be recalculated in the year of change and moving forward.
- Plant assets are reported on the balance sheet in the Property, Plant, and Equipment section at book value (cost − accumulated depreciation).

3. How are disposals of plant assets recorded?

- There are four steps to recording disposals.
  - Step 1: Bring the depreciation up to date.
  - Step 2: Remove the old, disposed-of asset and associated accumulated depreciation from the books.
  - Step 3: Record the value of any cash received (or paid) in the disposal of the asset.
  - Step 4: Determine the amount of any gain or loss. (Market value of assets received compared to the book value of the asset disposed of.)
- Review Exhibit 9-10 for a summary of disposal of plant assets journal entries.

4. How are natural resources accounted for?

- Natural resources are assets that come from the earth and are consumed. Examples include iron ore, oil, natural gas, diamonds, gold, and timber.
- Depletion is the process by which businesses spread the allocation of a natural resource's cost over its usage.
- Depletion expense is computed by the units-of-production method.

5. How are intangible assets accounted for?

- Intangible assets are assets that have no physical form and are valuable because of special rights they carry. Examples include patents, copyrights, trademarks, franchises, licenses, and goodwill.
- Amortization is the process by which businesses spread the allocation of an intangible asset's cost over its useful life.
- Amortization expense is computed by the straight-line method.

6. How do we use the asset turnover ratio to evaluate business performance?

- The asset turnover ratio measures the amount of net sales generated for each average dollar of total assets invested.
- Net sales / Average total assets.

7. How are exchanges of plant assets accounted for? (Appendix 9A)

- Exchanges that have commercial substance require the recording of any gain or loss on the transaction.
- Exchanges that lack commercial substance ignore any gain or loss on the transaction, except in a few limited cases.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Latté On Demand purchased a coffee drink machine on January 1, 2018, for $44,000. Expected useful life is 10 years or 100,000 drinks. In 2018, 3,000 drinks were sold, and in 2019, 14,000 drinks were sold. Residual value is $4,000.

Requirements

1. Determine the depreciation expense for 2018 and 2019 using the following methods (See Learning Objective 2):
   - **a.** Straight-line
   - **b.** Units-of-production
   - **c.** Double-declining-balance
2. Prepare a schedule that shows annual depreciation expense, accumulated depreciation, and book value for 2018 and 2019 using the following methods (See Learning Objective 2):
   - **a.** Straight-line
   - **b.** Units-of-production
   - **c.** Double-declining-balance
3. Assume that Latté On Demand sold the equipment for $27,000 cash on July 1, 2020. Assume that management has depreciated the equipment by using the double-declining-balance method. Record Latté On Demand's depreciation for 2020 and the sale of the equipment on July 1, 2020. (See Learning Objective 3)

> Solution

Requirement 1

a.

2018: ($44,000 − $4,000) / 10 years = $4,000
2019: ($44,000 − $4,000) / 10 years = $4,000

b.

Depreciation per unit = ($44,000 − $4,000) / 100,000 drinks = $0.40 per drink
2018: $0.40 per drink × 3,000 drinks = $1,200
2019: $0.40 per drink × 14,000 drinks = $5,600

c.

2018: ($44,000 − $0) × 2 × (1 / 10 years) = $8,800
2019: ($44,000 − $8,800) × 2 × (1 / 10 years) = $7,040

Requirement 2

a.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			$ 44,000
12-31-2018	$ 4,000	$ 4,000	40,000
12-31-2019	4,000	8,000	36,000

b.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			$ 44,000
12-31-2018	$ 1,200	$ 1,200	42,800
12-31-2019	5,600	6,800	37,200

c.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			$ 44,000
12-31-2018	$ 8,800	$ 8,800	35,200
12-31-2019	7,040	15,840	28,160

Requirement 3

Depreciation expense for 2020:

($44,000 − $15,840) × 2 × (1 / 10 years) × (6 / 12) = $2,816

Date	Accounts and Explanation	Debit	Credit
2020			
Jul. 1	Depreciation Expense—Equipment	2,816	
	Accumulated Depreciation—Equipment		2,816
	To record depreciation on equipment.		
1	Cash	27,000	
	Accumulated Depreciation—Equipment ($15,840 + $2,816)	18,656	
	Gain on Disposal		1,656
	Equipment		44,000
	Sold equipment for cash.		

> Key Terms

Accelerated Depreciation Method (p. 498)
Amortization (p. 512)
Asset Turnover Ratio (p. 516)
Book Value (p. 496)
Capital Expenditure (p. 493)
Capitalize (p. 491)
Commercial Substance (p. 517) (Appendix 9A)
Copyright (p. 513)
Cost Principle (p. 490)
Depletion (p. 511)
Depreciable Cost (p. 495)
Depreciation (p. 489)
Double-Declining-Balance Method (p. 498)
Extraordinary Repair (p. 493)
Franchise (p. 514)
Goodwill (p. 514)
Impairment (p. 512)
Intangible Asset (p. 512)
Land Improvement (p. 490)
License (p. 514)
Modified Accelerated Cost Recovery System (MACRS) (p. 500)
Natural Resource (p. 511)
Obsolete (p. 495)
Patent (p. 512)
Property, Plant, and Equipment (PP&E) (p. 489)
Relative-Market-Value Method (p. 492)
Residual Value (p. 495)
Revenue Expenditure (p. 493)
Straight-Line Method (p. 496)
Trademark (p. 514)
Units-of-Production Method (p. 497)
Useful Life (p. 495)

> Quick Check

Learning Objective 1

1. Which cost is *not* recorded as part of the cost of a building?
   - **a.** Real estate commission paid to buy the building
   - **b.** Construction materials and labor
   - **c.** Concrete for the building's foundation
   - **d.** Annual building maintenance

Learning Objective 1

2. How should you record a capital expenditure?
   - **a.** Debit a liability
   - **b.** Debit capital
   - **c.** Debit an expense
   - **d.** Debit an asset

Learning Objective 2

3. Which method almost always produces the most depreciation in the first year?
   - **a.** Units-of-production
   - **b.** Straight-line
   - **c.** Double-declining-balance
   - **d.** All produce the same depreciation in the first year.

Learning Objective 2

4. A Celty Airline jet costs $28,000,000 and is expected to fly 200,000,000 miles during its 10-year life. Residual value is expected to be zero because the plane was used when acquired. If the plane travels 1,000,000 miles the first year, how much depreciation should Celty Airline record under the units-of-production method?
   - **a.** $2,800,000
   - **b.** $140,000
   - **c.** $560,000
   - **d.** Cannot be determined from the data given

Learning Objective 3

5. A copy machine costs $45,000 when new and has accumulated depreciation of $44,000. Suppose Print and Photo Center discards this machine and receives nothing. What is the result of the disposal transaction?
   - **a.** No gain or loss
   - **b.** Gain of $1,000
   - **c.** Loss of $1,000
   - **d.** Loss of $45,000

Learning Objective 3

6. Suppose Print and Photo Center in the preceding question sold the machine for $1,000. What is the result of this disposal transaction?
   - **a.** Loss of $44,000
   - **b.** Gain of $1,000
   - **c.** Loss of $1,000
   - **d.** No gain or loss

Learning Objective 4

7. Which method is used to compute depletion?
   - **a.** Double-declining-balance method
   - **b.** Straight-line method
   - **c.** Depletion method
   - **d.** Units-of-production method

Learning Objective 5

8. Which intangible asset is recorded only as part of the acquisition of another company?
   - **a.** Patent
   - **b.** Goodwill
   - **c.** Copyright
   - **d.** Franchise

Learning Objective 6

9. Liberty Corporation reported beginning and ending total assets of $25,000 and $22,000, respectively. Its net sales for the year were $18,800. What was Liberty's asset turnover ratio?

   a. 0.75 **b.** 0.85 **c.** 0.80 **d.** 1.25

Learning Objective 7 Appendix 9A

10A. A truck costs $50,000 when new and has accumulated depreciation of $35,000. Suppose Wilson Towing exchanges the truck for a new truck. The new truck has a market value of $60,000, and Wilson pays cash of $40,000. Assume the exchange has commercial substance. What is the result of this exchange?

   a. No gain or loss
   b. Gain of $5,000
   c. Loss of $5,000
   d. Gain of $45,000

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. Define property, plant, and equipment. Provide some examples.
2. Plant assets are recorded at historical cost. What does the historical cost of a plant asset include?
3. How do land improvements differ from land?
4. What does the word *capitalize* mean?
5. What is a lump-sum purchase, and how is it accounted for?
6. What is the difference between a capital expenditure and a revenue expenditure? Give an example of each.
7. What is depreciation? Define useful life, residual value, and depreciable cost.
8. Which depreciation method ignores residual value until the last year of depreciation? Why?
9. How does a business decide which depreciation method is best to use?
10. What is the depreciation method that is used for tax accounting purposes? How is it different than the methods that are required by GAAP to be used for financial accounting purposes?
11. If a business changes the estimated useful life or estimated residual value of a plant asset, what must the business do in regard to depreciation expense?
12. What financial statement are property, plant, and equipment reported on, and how?
13. How is discarding of a plant asset different from selling a plant asset?
14. How is gain or loss determined when disposing of plant assets? What situation constitutes a gain? What situation constitutes a loss?
15. What is a natural resource? What is the process by which businesses spread the allocation of a natural resource's cost over its usage?
16. What is an intangible asset? Provide some examples.

17. What is the process by which businesses spread the allocation of an intangible asset's cost over its useful life?

18. What is goodwill? Is goodwill amortized? What happens if the value of goodwill has decreased at the end of the year?

19. What does the asset turnover ratio measure, and how is it calculated?

20A. What does it mean if an exchange of plant assets has commercial substance? Are gains and losses recorded on the books because of the exchange?

> Short Exercises

Learning Objective 1

S9-1 Determining the cost of an asset

Highland Clothing purchased land, paying $96,000 cash and signing a $300,000 note payable. In addition, Highland paid delinquent property tax of $1,100, title insurance costing $600, and $4,600 to level the land and remove an unwanted building. Record the journal entry for purchase of the land.

Learning Objective 1

S9-2 Making a lump-sum asset purchase

Concord Pet Care Clinic paid $210,000 for a group purchase of land, building, and equipment. At the time of the acquisition, the land had a market value of $110,000, the building $88,000, and the equipment $22,000. Journalize the lump-sum purchase of the three assets for a total cost of $210,000, the amount for which the business signed a note payable.

Learning Objective 2

S9-3 Computing first-year depreciation and book value

On January 1, 2018, Air Canadians purchased a used airplane for $37,000,000. Air Canadians expects the plane to remain useful for five years (4,000,000 miles) and to have a residual value of $5,000,000. The company expects the plane to be flown 1,400,000 miles during the first year.

Requirements

1. Compute Air Canadians's *first-year* depreciation expense on the plane using the following methods:
   - **a.** Straight-line
   - **b.** Units-of-production
   - **c.** Double-declining-balance
2. Show the airplane's book value at the end of the first year for all three methods.

Learning Objective 2

S9-4 Computing second-year depreciation and accumulated depreciation

On January 1, 2018, Advanced Airline purchased a used airplane at a cost of $60,500,000. Advanced Airline expects the plane to remain useful for eight years (5,000,000 miles) and to have a residual value of $5,500,000. Advanced Airline expects the plane to be flown 1,100,000 miles the first year and 1,200,000 miles the second year.

Requirements

1. Compute *second-year* (2019) depreciation expense on the plane using the following methods:
   a. Straight-line
   b. Units-of-production
   c. Double-declining-balance
2. Calculate the balance in Accumulated Depreciation at the end of the second year for all three methods.

S9-5 Calculating partial-year depreciation

Learning Objective 2

On February 28, 2017, Rural Tech Support purchased a copy machine for $53,400. Rural Tech Support expects the machine to last for six years and have a residual value of $3,000. Compute depreciation expense on the machine for the year ended December 31, 2017, using the straight-line method.

S9-6 Changing the estimated life of an asset

Learning Objective 2

Assume that Smith's Auto Sales paid $45,000 for equipment with a 15-year life and zero expected residual value. After using the equipment for six years, the company determines that the asset will remain useful for only five more years.

Requirements

1. Record depreciation expense on the equipment for Year 7 by the straight-line method.
2. What is accumulated depreciation at the end of Year 7?

S9-7 Discarding of a fully depreciated asset

Learning Objective 3

On June 15, 2017, Family Furniture discarded equipment that had a cost of $27,000, a residual value of $0, and was fully depreciated. Journalize the disposal of the equipment.

S9-8 Discarding an asset

Learning Objective 3

On October 31, 2018, Alternative Landscapes discarded equipment that had a cost of $26,920. Accumulated Depreciation as of December 31, 2017, was $25,000. Assume annual depreciation on the equipment is $1,920. Journalize the partial-year depreciation expense and disposal of the equipment.

S9-9 Selling an asset at gain or loss

Learning Objective 3

Alpha Communication purchased equipment on January 1, 2018, for $27,500. Suppose Alpha Communication sold the equipment for $20,000 on December 31, 2020. Accumulated Depreciation as of December 31, 2020, was $10,000. Journalize the sale of the equipment, assuming straight-line depreciation was used.

S9-10 Selling an asset at gain or loss

Learning Objective 3

Peter Company purchased equipment on January 1, 2018, for $28,000. Suppose Peter Company sold the equipment for $4,000 on December 31, 2019. Accumulated Depreciation as of December 31, 2019, was $11,000. Journalize the sale of the equipment, assuming straight-line depreciation was used.

Learning Objective 4

S9-11 Accounting for depletion of natural resources

Ajax Petroleum holds huge reserves of oil assets. Assume that at the end of 2018, Ajax Petroleum's cost of oil reserves totaled $27,000,000, representing 3,000,000 barrels of oil.

Requirements

1. Which method does Ajax Petroleum use to compute depletion?
2. Suppose Ajax Petroleum removed and sold 500,000 barrels of oil during 2019. Journalize depletion expense for 2019.

Learning Objective 5

S9-12 Accounting for an intangible asset

On October 1, 2018, Modern Company purchased a patent for $153,600 cash. Although the patent gives legal protection for 20 years, the patent is expected to be used for only eight years.

Requirements

1. Journalize the purchase of the patent.
2. Journalize the amortization expense for the year ended December 31, 2018. Assume straight-line amortization.

Learning Objective 5

S9-13 Accounting for goodwill

Decca Publishing paid $230,000 to acquire *Thrifty Nickel*, a weekly advertising paper. At the time of the acquisition, *Thrifty Nickel*'s balance sheet reported total assets of $130,000 and liabilities of $70,000. The fair market value of *Thrifty Nickel*'s assets was $100,000. The fair market value of *Thrifty Nickel*'s liabilities was $70,000.

Requirements

1. How much goodwill did Decca Publishing purchase as part of the acquisition of *Thrifty Nickel*?
2. Journalize Decca Publishing's acquisition of *Thrifty Nickel*.

Learning Objective 6

S9-14 Computing the asset turnover ratio

Biagas, Inc. had net sales of $55,600,000 for the year ended May 31, 2018. Its beginning and ending total assets were $52,800,000 and $98,500,000, respectively. Determine Biagas's asset turnover ratio for year ended May 31, 2018.

Learning Objective 7
Appendix 9A

S9A-15 Exchanging plant assets

Micron Precision, Inc. purchased a computer for $2,500, debiting Computer Equipment. During 2016 and 2017, Micron Precision, Inc. recorded total depreciation of $1,600 on the computer. On January 1, 2018, Micron Precision, Inc. traded in the computer for a new one, paying $2,100 cash. The fair market value of the new computer is $3,900. Journalize Micron Precision, Inc.'s exchange of computers. Assume the exchange had commercial substance.

Learning Objective 7
Appendix 9A

S9A-16 Exchanging plant assets

White Corporation purchased equipment for $22,000. White recorded total depreciation of $19,000 on the equipment. On January 1, 2018, White traded in the equipment for new equipment, paying $23,200 cash. The fair market value of the new equipment is $25,100. Journalize White Corporation's exchange of equipment. Assume the exchange had commercial substance.

> Exercises

E9-17 Determining the cost of assets

Learning Objective 1

1. Land $333,000

Lawson Furniture purchased land, paying $65,000 cash and signing a $250,000 note payable. In addition, Lawson paid delinquent property tax of $5,000, title insurance costing $4,000, and $9,000 to level the land and remove an unwanted building. The company then constructed an office building at a cost of $400,000. It also paid $54,000 for a fence around the property, $12,000 for a sign near the entrance, and $8,000 for special lighting of the grounds.

Requirements

1. Determine the cost of the land, land improvements, and building.
2. Which of these assets will Lawson depreciate?

E9-18 Making a lump-sum purchase of assets

Learning Objective 1

Lot 3 $177,500

Maplewood Properties bought three lots in a subdivision for a lump-sum price. An independent appraiser valued the lots as follows:

Lot	Appraised Value
1	$ 144,000
2	96,000
3	240,000

Maplewood paid $355,000 in cash. Record the purchase in the journal, identifying each lot's cost in a separate Land account. Round decimals to two places, and use the computed percentages throughout.

E9-19 Distinguishing capital expenditures from revenue expenditures

Learning Objective 1

Consider the following expenditures:

a. Purchase price.
b. Ordinary recurring repairs to keep the machinery in good working order.
c. Lubrication before machinery is placed in service.
d. Periodic lubrication after machinery is placed in service.
e. Major overhaul to extend useful life by three years.
f. Sales tax paid on the purchase price.
g. Transportation and insurance while machinery is in transit from seller to buyer.
h. Installation.
i. Training of personnel for initial operation of the machinery.

Classify each of the expenditures as a capital expenditure or a revenue expenditure related to machinery.

CHAPTER 9

Learning Objective 2

1. Double-declining-balance, 12/31/19, Exp. $8,250

E9-20 Computing depreciation—three methods

Crispy Fried Chicken bought equipment on January 2, 2018, for $33,000. The equipment was expected to remain in service for four years and to operate for 6,750 hours. At the end of the equipment's useful life, Crispy's estimates that its residual value will be $6,000. The equipment operated for 675 hours the first year, 2,025 hours the second year, 2,700 hours the third year, and 1,350 hours the fourth year.

Requirements

1. Prepare a schedule of *depreciation expense*, *accumulated depreciation*, and *book value* per year for the equipment under the three depreciation methods: straight-line, units-of-production, and double-declining-balance. Show your computations. *Note: Three depreciation schedules must be prepared.*
2. Which method tracks the wear and tear on the equipment most closely?

Learning Objective 2

Yr. 16 $14,350

E9-21 Changing an asset's useful life and residual value

Salem Hardware Consultants purchased a building for $540,000 and depreciated it on a straight-line basis over a 40-year period. The estimated residual value is $100,000. After using the building for 15 years, Salem realized that wear and tear on the building would wear it out before 40 years and that the estimated residual value should be $88,000. Starting with the 16th year, Salem began depreciating the building over a revised total life of 35 years using the new residual value. Journalize depreciation expense on the building for years 15 and 16.

Learning Objectives 2, 3

Depr. Exp. $3,400

E9-22 Recording partial-year depreciation and sale of an asset

On January 2, 2017, Comfy Clothing Consignments purchased showroom fixtures for $17,000 cash, expecting the fixtures to remain in service for five years. Comfy has depreciated the fixtures on a double-declining-balance basis, with zero residual value. On October 31, 2018, Comfy sold the fixtures for $7,600 cash. Record both depreciation expense for 2018 and sale of the fixtures on October 31, 2018.

Learning Objectives 2, 3

Loss $(2,000)

E9-23 Recording partial-year depreciation and sale of an asset

On January 2, 2016, Pet Spa purchased fixtures for $37,800 cash, expecting the fixtures to remain in service for six years. Pet Spa has depreciated the fixtures on a straight-line basis, with $9,000 residual value. On May 31, 2018, Pet Spa sold the fixtures for $24,200 cash. Record both depreciation expense for 2018 and sale of the fixtures on May 31, 2018.

Learning Objective 4

$1.30 per ton

E9-24 Journalizing natural resource depletion

Cannon Mountain Mining paid $462,300 for the right to extract mineral assets from a 400,000-ton deposit. In addition to the purchase price, Cannon also paid a $900 filing fee, a $1,800 license fee to the state of Nevada, and $55,000 for a geological survey of the property. Because Cannon purchased the rights to the minerals only and did not purchase the land, it expects the asset to have zero residual value. During the first year, Cannon removed and sold 50,000 tons of the minerals. Make journal entries to record (a) purchase of the minerals (debit Minerals), (b) payment of fees and other costs, and (c) depletion for the first year.

Learning Objectives 2, 5

2. Amort. Exp. $50,000

E9-25 Handling acquisition of patent, amortization, and change in useful life

Melbourn Printers (MP) manufactures printers. Assume that MP recently paid $200,000 for a patent on a new laser printer. Although it gives legal protection for 20 years, the patent is expected to provide a competitive advantage for only eight years.

Requirements

1. Assuming the straight-line method of amortization, make journal entries to record (a) the purchase of the patent and (b) amortization for the first full year.
2. After using the patent for four years, MP learns at an industry trade show that another company is designing a more efficient printer. On the basis of this new information, MP decides, starting with Year 5, to amortize the remaining cost of the patent over two remaining years, giving the patent a total useful life of six years. Record amortization for Year 5.

E9-26 Measuring and recording goodwill

Learning Objective 5

1. Goodwill $1,000,000

Princeton has acquired several other companies. Assume that Princeton purchased Kelleher for $9,000,000 cash. The book value of Kelleher's assets is $19,000,000 (market value, $20,000,000), and it has liabilities of $12,000,000 (market value, $12,000,000).

Requirements

1. Compute the cost of the goodwill purchased by Princeton.
2. Record the purchase of Kelleher by Princeton.

E9-27 Computing asset turnover ratio

Learning Objective 6

Blackerby Photo reported the following figures on its December 31, 2018, income statement and balance sheet:

Net sales	$ 441,000	
	Dec. 31, 2018	**Dec. 31, 2017**
Cash	$ 31,000	$ 30,000
Accounts Receivable	68,000	65,000
Merchandise Inventory	80,000	79,000
Prepaid Expenses	16,000	5,000
Property, plant, and equipment, net	175,000	18,000

Compute the asset turnover ratio for 2018 Round to two decimal places.

E9A-28 Exchanging assets—two situations

Learning Objective 7
Appendix 9A

2. Loss $(7,000)

Partner Bank recently traded in office fixtures. Here are the facts:

Old fixtures:	New fixtures:
Cost, $91,000	Cash paid, $110,000
Accumulated depreciation, $68,000	Market value, $133,000

Requirements

1. Record Partner Bank's trade-in of old fixtures for new ones. Assume the exchange had commercial substance.
2. Now let's change one fact. Partner Bank feels compelled to do business with Elm Furniture, a bank customer, even though the bank can get the fixtures elsewhere at a better price. Partner Bank is aware that the new fixtures' market value is only $126,000. Record the trade-in. Assume the exchange had commercial substance.

Learning Objectives 1, 2, 7
Appendix 9A

1. $11,880

E9A-29 Measuring asset cost, units-of-production depreciation, and asset trade

Wimot Trucking Corporation uses the units-of-production depreciation method because units-of-production best measures wear and tear on the trucks. Consider these facts about one Mack truck in the company's fleet.

When acquired in 2015, the rig cost $360,000 and was expected to remain in service for 10 years or 1,000,000 miles. Estimated residual value was $90,000. The truck was driven 80,000 miles in 2015, 120,000 miles in 2016, and 160,000 miles in 2017. After 44,000 miles, on March 15, 2018, the company traded in the Mack truck for a less expensive Freightliner. Wimot also paid cash of $20,000. Fair market value of the Mack truck was equal to its net book value on the date of the trade.

Requirements

1. Record the journal entry for depreciation expense in 2018.
2. Determine Wimot's cost of the new truck.
3. Record the journal entry for the exchange of assets on March 15, 2018. Assume the exchange had commercial substance.

> Problems Group A

Learning Objectives 1, 2

1. Bldg. $461,100

P9-30A Determining asset cost and recording partial-year depreciation, straight-line

Discount Parking, near an airport, incurred the following costs to acquire land, make land improvements, and construct and furnish a small building:

a.	Purchase price of three acres of land	$ 80,000
b.	Delinquent real estate taxes on the land to be paid by Discount Parking	6,300
c.	Additional dirt and earthmoving	9,000
d.	Title insurance on the land acquisition	3,200
e.	Fence around the boundary of the property	9,600
f.	Building permit for the building	1,000
g.	Architect's fee for the design of the building	20,700
h.	Signs near the front of the property	9,300
i.	Materials used to construct the building	215,000
j.	Labor to construct the building	175,000
k.	Interest cost on construction loan for the building	9,400
l.	Parking lots on the property	28,500
m.	Lights for the parking lots	11,200
n.	Salary of construction supervisor (80% to building; 20% to parking lot and concrete walks)	50,000
o.	Furniture	11,200
p.	Transportation of furniture from seller to the building	2,200
q.	Additional fencing	6,600

Discount Parking depreciates land improvements over 15 years, buildings over 40 years, and furniture over 10 years, all on a straight-line basis with zero residual value.

Requirements

1. Set up columns for Land, Land Improvements, Building, and Furniture. Show how to account for each cost by listing the cost under the correct account. Determine the total cost of each asset.
2. All construction was complete and the assets were placed in service on October 1. Record partial-year depreciation expense for the year ended December 31. Round to the nearest dollar.

P9-31A Determining asset cost, preparing depreciation schedules (3 methods), and identifying depreciation results that meet management objectives

Learning Objectives 1, 2

1. Units-of-production, 12/31/18, Dep. Exp. $24,000

On January 3, 2018, Rapid Delivery Service purchased a truck at a cost of $100,000. Before placing the truck in service, Rapid spent $3,000 painting it, $600 replacing tires, and $10,400 overhauling the engine. The truck should remain in service for five years and have a residual value of $12,000. The truck's annual mileage is expected to be 32,000 miles in each of the first four years and 8,000 miles in the fifth year—136,000 miles in total. In deciding which depreciation method to use, Andy Sargeant, the general manager, requests a depreciation schedule for each of the depreciation methods (straight-line, units-of-production, and double-declining-balance).

Requirements

1. Prepare a depreciation schedule for each depreciation method, showing asset cost, depreciation expense, accumulated depreciation, and asset book value.
2. Rapid prepares financial statements using the depreciation method that reports the highest net income in the early years of asset use. Consider the first year that Rapid uses the truck. Identify the depreciation method that meets the company's objectives.

P9-32A Recording lump-sum asset purchases, depreciation, and disposals

Learning Objectives 1, 2, 3

Sep. 1 Gain $193,250

Ellie Johnson Associates surveys American eating habits. The company's accounts include Land, Buildings, Office Equipment, and Communication Equipment, with a separate Accumulated Depreciation account for each depreciable asset. During 2018, Ellie Johnson Associates completed the following transactions:

Jan. 1	Purchased office equipment, $113,000. Paid $80,000 cash and financed the remainder with a note payable.
Apr. 1	Acquired land and communication equipment in a lump-sum purchase. Total cost was $310,000 paid in cash. An independent appraisal valued the land at $244,125 and the communication equipment at $81,375.
Sep. 1	Sold a building that cost $520,000 (accumulated depreciation of $285,000 through December 31 of the preceding year). Ellie Johnson Associates received $420,000 cash from the sale of the building. Depreciation is computed on a straight-line basis. The building has a 40-year useful life and a residual value of $25,000.
Dec. 31	Recorded depreciation as follows:
	Communication equipment is depreciated by the straight-line method over a five-year life with zero residual value.
	Office equipment is depreciated using the double-declining-balance method over five years with a $1,000 residual value.

Record the transactions in the journal of Ellie Johnson Associates.

Learning Objective 4

Depl. Exp. $548,640

P9-33A Accounting for natural resources

Conseco Oil, Inc. has an account titled Oil and Gas Properties. Conseco paid $6,600,000 for oil reserves holding an estimated 1,000,000 barrels of oil. Assume the company paid $570,000 for additional geological tests of the property and $450,000 to prepare for drilling. During the first year, Conseco removed and sold 72,000 barrels of oil. Record all of Conseco's transactions, including depletion for the first year.

Learning Objective 5

1. Goodwill $230,000

P9-34A Accounting for intangibles

Midland States Telecom provides communication services in Iowa, Nebraska, the Dakotas, and Montana. Midland States Telecom purchased goodwill as part of the acquisition of Sheldon Wireless Enterprises, which had the following figures:

Book value of assets	$ 900,000
Market value of assets	1,400,000
Market value of liabilities	530,000

Requirements

1. Journalize the entry to record Midland States Telecom's purchase of Sheldon Wireless for $440,000 cash plus a $660,000 note payable.
2. What special asset does Midland States Telecom's acquisition of Sheldon Wireless identify? How should Midland States Telecom account for this asset after acquiring Sheldon Wireless? Explain in detail.

Learning Objectives 2, 3, 7
Appendix 9A

Jan. 1 Gain $8,000

P9A-35A Journalizing partial-year depreciation and asset disposals and exchanges

During 2018, Mora Corporation completed the following transactions:

Jan. 1	Traded in old office equipment with book value of $55,000 (cost of $127,000 and accumulated depreciation of $72,000) for new equipment. Mora also paid $70,000 in cash. Fair value of new equipment is $133,000. Assume the exchange had commercial substance.
Apr. 1	Sold equipment that cost $18,000 (accumulated depreciation of $8,000 through December 31 of the preceding year). Mora received $6,100 cash from the sale of the equipment. Depreciation is computed on a straight-line basis. The equipment has a five-year useful life and a residual value of $0.
Dec. 31	Recorded depreciation as follows:
	Office equipment is depreciated using the double-declining-balance method over four years with a $9,000 residual value.

Record the transactions in the journal of Mora Corporation.

> Problems Group B

P9-36B Determining asset cost and recording partial-year depreciation

Learning Objectives 1, 2

1. Bldg. $483,500

Safe Parking, near an airport, incurred the following costs to acquire land, make land improvements, and construct and furnish a small building:

a.	Purchase price of three acres of land	$ 86,000
b.	Delinquent real estate taxes on the land to be paid by Safe Parking	6,300
c.	Additional dirt and earthmoving	8,400
d.	Title insurance on the land acquisition	3,400
e.	Fence around the boundary of the property	9,600
f.	Building permit for the building	900
g.	Architect's fee for the design of the building	20,100
h.	Signs near the front of the property	9,000
i.	Materials used to construct the building	217,000
j.	Labor to construct the building	172,000
k.	Interest cost on construction loan for the building	9,500
l.	Parking lots on the property	29,400
m.	Lights for the parking lots	11,600
n.	Salary of construction supervisor (80% to building; 20% to parking lot and concrete walks)	80,000
o.	Furniture	11,700
p.	Transportation of furniture from seller to the building	1,900
q.	Additional fencing	6,900

Safe Parking depreciates land improvements over 15 years, buildings over 40 years, and furniture over 10 years, all on a straight-line basis with zero residual value.

Requirements

1. Set up columns for Land, Land Improvements, Building, and Furniture. Show how to account for each cost by listing the cost under the correct account. Determine the total cost of each asset.
2. All construction was complete and the assets were placed in service on September 1. Record partial-year depreciation expense for the year ended December 31. Round to the nearest dollar.

P9-37B Determining asset cost, preparing depreciation schedules (3 methods), and identifying depreciation results that meet management objectives

Learning Objectives 1, 2

1. Units-of-production, 12/31/18, Dep. Exp. $15,000

On January 3, 2018, Speedy Delivery Service purchased a truck at a cost of $67,000. Before placing the truck in service, Speedy spent $3,000 painting it, $1,200 replacing tires, and $3,500 overhauling the engine. The truck should remain in service for five years and have a residual value of $5,100. The truck's annual mileage is expected to be 20,000 miles in each of the first four years and 12,800 miles in the fifth year—92,800 miles in total. In deciding which depreciation method to use, Alec Rivera, the general manager, requests a depreciation schedule for each of the depreciation methods (straight-line, units-of-production, and double-declining-balance).

Requirements

1. Prepare a depreciation schedule for each depreciation method, showing asset cost, depreciation expense, accumulated depreciation, and asset book value.
2. Speedy prepares financial statements using the depreciation method that reports the highest net income in the early years of asset use. Consider the first year that Speedy uses the truck. Identify the depreciation method that meets the company's objectives.

Learning Objectives 1, 2, 3

Sep. 1 Gain $163,250

P9-38B Recording lump-sum asset purchases, depreciation, and disposals

Whitney Plumb Associates surveys American eating habits. The company's accounts include Land, Buildings, Office Equipment, and Communication Equipment, with a separate Accumulated Depreciation account for each asset. During 2018, Whitney Plumb completed the following transactions:

Jan. 1	Purchased office equipment, $117,000. Paid $77,000 cash and financed the remainder with a note payable.
Apr. 1	Acquired land and communication equipment in a lump-sum purchase. Total cost was $350,000 paid in cash. An independent appraisal valued the land at $275,625 and the communication equipment at $91,875.
Sep. 1	Sold a building that cost $520,000 (accumulated depreciation of $285,000 through December 31 of the preceding year). Whitney Plumb received $390,000 cash from the sale of the building. Depreciation is computed on a straight-line basis. The building has a 40-year useful life and a residual value of $25,000.
Dec. 31	Recorded depreciation as follows: Communication equipment is depreciated by the straight-line method over a five-year life with zero residual value. Office equipment is depreciated using the double-declining-balance method over five years with a $2,000 residual value.

Record the transactions in the journal of Whitney Plumb Associates.

Learning Objective 4

Depl. Exp. $1,383,750

P9-39B Accounting for natural resources

Donahue Oil Incorporated has an account titled Oil and Gas Properties. Donahue paid $6,400,000 for oil reserves holding an estimated 400,000 barrels of oil. Assume the company paid $510,000 for additional geological tests of the property and $470,000 to prepare for drilling. During the first year, Donahue removed and sold 75,000 barrels of oil. Record all of Donahue's transactions, including depletion for the first year.

Learning Objective 5

1. Goodwill $210,000

P9-40B Accounting for intangibles

Core Telecom provides communication services in Iowa, Nebraska, the Dakotas, and Montana. Core purchased goodwill as part of the acquisition of Surety Wireless Company, which had the following figures:

Book value of assets	$ 700,000
Market value of assets	1,000,000
Market value of liabilities	510,000

Requirements

1. Journalize the entry to record Core's purchase of Surety Wireless for $280,000 cash plus a $420,000 note payable.
2. What special asset does Core's acquisition of Surety Wireless identify? How should Core Telecom account for this asset after acquiring Surety Wireless? Explain in detail.

P9A-41B Journalizing partial-year depreciation and asset disposals and exchanges

Learning Objectives 2, 3, 7
Appendix 9A

Jan. 1 Gain $6,000

During 2018, Lora Company completed the following transactions:

Jan. 1	Traded in old office equipment with book value of $55,000 (cost of $129,000 and accumulated depreciation of $74,000) for new equipment. Lora also paid $55,000 in cash. Fair value of new equipment is $116,000. Assume the exchange had commercial substance.
Apr. 1	Sold equipment that cost $12,000 (accumulated depreciation of $1,000 through December 31 of the preceding year). Lora received $7,100 cash from the sale of the equipment. Depreciation is computed on a straight-line basis. The equipment has a five-year useful life and a residual value of $0.
Dec. 31	Recorded depreciation as follows:
	Office equipment is depreciated using the double-declining-balance method over four years with a $7,000 residual value.

Record the transactions in the journal of Lora Company.

CRITICAL THINKING

> Using Excel

P9-42 Using Excel to prepare depreciation schedules

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

The Fraser River Corporation has purchased a new piece of factory equipment on January 1, 2018, and wishes to compare three depreciation methods: straight-line, double-declining-balance, and units-of-production.

The equipment costs $400,000 and has an estimated useful life of four years, or 8,000 hours. At the end of four years, the equipment is estimated to have a residual value of $20,000.

Requirements

1. Use Excel to prepare depreciation schedules for straight-line, double-declining-balance, and units-of-production methods. Use cell references from the Data table.
2. Prepare a second depreciation schedule for double-declining-balance method, using the Excel function DDB. The DDB function cannot be used in the last year of the asset's useful life.
3. At December 31, 2018, Fraser River is trying to determine if it should sell the factory equipment. Fraser River will only sell the factory equipment if the company earns a gain of at least $6,000. For each of the three depreciation methods, what is the minimum amount that Fraser River will sell the factory equipment for in order to have a gain of $6,000?

> Continuing Problem

P9-43 Calculating and journalizing partial-year depreciation

This problem continues the Canyon Canoe Company situation from Chapter 8. Amber and Zack Wilson are continuing to review business practices. Currently, they are reviewing the company's property, plant, and equipment and have gathered the following information:

Asset	Acquisition Date	Cost	Estimated Life	Estimated Residual Value	Depreciation Method*	Monthly Depreciation Expense
Canoes	Nov. 3, 2018	$ 4,800	4 years	$ 0	SL	$ 100
Land	Dec. 1, 2018	85,000			n/a	
Building	Dec. 1, 2018	35,000	5 years	5,000	SL	500
Canoes	Dec. 2, 2018	7,200	4 years	0	SL	150
Computer	Mar. 2, 2019	3,600	3 years	300	DDB	
Office Furniture	Mar. 3, 2019	3,000	5 years	600	SL	

*SL = Straight-line; DDB = Double-declining-balance

Requirements

1. Calculate the amount of monthly depreciation expense for the computer and office furniture for 2019.
2. For each asset, determine the book value as of December 31, 2018. Then, calculate the depreciation expense for the first six months of 2019 and the book value as of June 30, 2019.
3. Prepare a partial balance sheet showing Property, Plant, and Equipment as of June 30, 2019.

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Chapters 7, 8, and 9

Top Quality Appliance—Long Beach has just purchased a franchise from Top Quality Appliance (TQA). TQA is a manufacturer of kitchen appliances. TQA markets its products via retail stores that are operated as franchises. As a TQA franchisee, Top Quality Appliance—Long Beach will receive many benefits, including having the exclusive right to sell TQA brand appliances in Long Beach. TQA appliances have an excellent reputation and the TQA name and logo are readily recognized by consumers. TQA also manages national television advertising campaigns that benefit the franchisees. In exchange for these benefits, Top Quality Appliance—Long Beach will pay an annual franchise fee to TQA based on a percentage of sales. The annual franchise fee is a separate cost and in addition to the purchase of the franchise.

In addition to purchasing the franchise, Top Quality Appliance—Long Beach will also purchase land with an existing building to use for its retail store, store fixtures, and office equipment. The business will purchase appliances from TQA and resell them in its store, primarily to local building contractors for installation in new homes.

Following is the chart of accounts for Top Quality Appliance—Long Beach. As a new business, all beginning balances are $0.

Top Quality Appliance—Long Beach Chart of Accounts	
Cash	Common Stock
Petty Cash	Retained Earnings
Accounts Receivable	Dividends
Allowance for Bad Debts	Sales Revenue
Merchandise Inventory	Interest Revenue
Office Supplies	Cost of Goods Sold
Prepaid Insurance	Franchise Fee Expense
Interest Receivable	Salaries Expense
Notes Receivable	Utilities Expense
Land	Insurance Expense
Building	Supplies Expense
Accumulated Depreciation—Building	Bad Debt Expense
Store Fixtures	Bank Expense
Accumulated Depreciation—Store Fixtures	Credit Card Expense
Office Equipment	Depreciation Expense—Building
Accumulated Depreciation—Office Equipment	Depreciation Expense—Store Fixtures
Franchise	Depreciation Expense—Office Equipment
Accounts Payable	Amortization Expense—Franchise
Interest Payable	Interest Expense
Notes Payable	Cash Short and Over

Top Quality Appliance—Long Beach completed the following transactions during 2018, its first year of operations:

a. Received $500,000 cash and issued common stock. Opened a new checking account at Long Beach National Bank and deposited the cash received from the stockholders.

b. Paid $50,000 cash for a TQA franchise.

c. Paid $200,000 cash and issued a $400,000, 10-year, 5% notes payable for land with an existing building. The assets had the following market values: Land, $100,000; Building, $500,000.

d. Paid $75,000 for store fixtures.

e. Paid $45,000 for office equipment.
f. Paid $600 for office supplies.
g. Paid $3,600 for a two-year insurance policy.
h. Purchased appliances from TQA (merchandise inventory) on account for $425,000.
i. Established a petty cash fund for $150.
j. Sold appliances on account to B&B Contractors for $215,000, terms n/30 (cost, $86,000).
k. Sold appliances to Davis Contracting for $150,000 (cost, $65,000), receiving a 6-month, 8% note.
l. Recorded credit card sales of $80,000 (cost, $35,000), net of processor fee of 2%.
m. Received payment in full from B&B Contractors.
n. Purchased appliances from TQA on account for $650,000.
o. Made payment on account to TQA, $300,000.
p. Sold appliances for cash to LB Home Builders for $350,000 (cost, $175,000).
q. Received payment in full on the maturity date from Davis Contracting for the note.
r. Sold appliances to Leard Contracting for $265,000 (cost, $130,000), receiving a 9-month, 8% note.
s. Made payment on account to TQA, $500,000.
t. Sold appliances on account to various businesses for $985,000, terms n/30 (cost, $395,000).
u. Collected $715,000 cash on account.
v. Paid cash for expenses: Salaries, $180,000; Utilities, $12,650
w. Replenished the petty cash fund when the fund had $62 in cash and petty cash tickets for $85 for office supplies.
x. Paid dividends, $5,000.
y. Paid the franchise fee to TQA of 5% of total sales of $2,045,000.

Requirements

1. Record the transactions in the general journal. Omit explanations.
2. Post to the general ledger.
3. It is a common business practice to reconcile the bank accounts on a monthly basis. However, in this problem, the reconciliation of the company's checking account will be done at the end of the year, based on an annual summary.

   Reconcile the bank account by comparing the following annual summary statement from Long Beach National Bank to the Cash account in the general ledger. Record journal entries as needed and post to the general ledger. Use transaction z as the posting reference.

Beginning Balance, January 1, 2018		$ 0
Deposits and other credits:		
	$ 500,000	
	78,400	
	215,000	
	350,000	
	715,000	
Interest Revenue	1,565	1,859,965
Checks and other debits:		
EFT to Bank Checks[(1)]	125	
Checks:	50,000	
	200,000	
	45,000	
	75,000	
	150	
	3,600	
	600	
	300,000	
	500,000	
	192,650	
Bank service charge	2,340	(1,369,465)
Ending balance, December 31, 2018		$ 490,500

[(1)] Bank Checks is a company that prints business checks (considered a bank expense) for Top Quality Appliance—Long Beach

4. In preparation for preparing the adjusting entries, complete depreciation schedules for the first five years for the depreciable plant assets, assuming the assets were purchased on January 2, 2018:
   a. Building, straight-line, 30 years, $50,000 residual value.
   b. Store Fixtures, straight-line, 15 years, no residual value.
   c. Office Equipment, double-declining-balance, 5 years, $5,000 residual value.
5. Record adjusting entries for the year ended December 31, 2018:
   a. One year of the prepaid insurance has expired.
   b. Management estimates that 5% of Accounts Receivable will be uncollectible.
   c. An inventory of office supplies indicates $475 of supplies have been used.
   d. Calculate the interest earned on the outstanding Leard Contracting note receivable. Assume the note was received on October 31. Round to the nearest dollar.
   e. Record depreciation expense for the year.
   f. Record amortization expense for the year on the franchise, which has a 10-year life.
   g. Calculate the interest owed on the note payable. Assume the note was issued on January 1.
6. Post adjusting entries and prepare an adjusted trial balance.

7. Prepare a multi-step income statement and statement of retained earnings for the year ended December 31, 2018. Prepare a classified balance sheet as of December 31, 2018. Assume Interest Receivable is a current asset and Interest Payable is a current liability.
8. Evaluate the company's success for the first year of operations by calculating the following ratios. Round to two decimal places. Comment on the results.
   a. Liquidity:
      i. Current ratio
      ii. Acid-test ratio
      iii. Cash ratio
   b. Efficiency:
      i. Accounts receivable turnover
      ii. Day's sales in receivables
      iii. Asset turnover
      iv. Rate of return on total assets

> Tying It All Together Case 9-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review McDonald's Corporation 2015 annual report (https://www.sec.gov/Archives/edgar/data/63908/000006390816000103/mcd-12312015x10k.htm).

McDonald's Corporation is the world's leading global food service retailer with more than 36,000 locations worldwide in more than 100 countries. The corporation operates and franchises McDonald's restaurants, which serve menu items such as the Big Mac, Chicken McNuggets, and McFlurry desserts. In addition, McDonald's also serves McCafe beverages and pastries.

Requirements

1. Where would McDonald's Corporation report plant assets on its financial statements? How are plant assets reported and what is the value as of December 31, 2015?
2. Does McDonald's Corporation depreciate its plant assets? How do you know? What is the depreciation method used and the useful lives?
3. How is the book value of plant assets calculated? What is the net book value of McDonald's plant assets as of December 31, 2015?
4. What type of intangibles would be included on McDonald's financial statements and where?
5. What is goodwill? Does McDonald's Corporation report goodwill? If so, how much goodwill is reported as of December 31, 2015? What does McDonald's goodwill primarily result from?

> Ethical Issue 9-1

Western Bank & Trust purchased land and a building for the lump sum of $3,000,000. To get the maximum tax deduction, Western allocated 90% of the purchase price to the building and only 10% to the land. A more realistic allocation would have been 70% to the building and 30% to the land.

Requirements

1. Explain the tax advantage of allocating too much to the building and too little to the land.
2. Was Western's allocation ethical? If so, state why. If not, why not? Identify who was harmed.

> Fraud Case 9-1

Jim Reed manages a fleet of utility trucks for a rural county government. He's been in his job for 30 years, and he knows where the angles are. He makes sure that when new trucks are purchased, the residual value is set as low as possible. Then, when they become fully depreciated, they are sold off by the county at residual value. Jim makes sure his buddies in the construction business are first in line for the bargain sales, and they make sure he gets a little something back. Recently, a new county commissioner was elected with vows to cut expenses for the taxpayers. Unlike other commissioners, this man has a business degree, and he is coming to visit Jim tomorrow.

Requirements

1. When a business sells a fully depreciated asset for its residual value, is a gain or loss recognized?
2. How do businesses determine what residual values to use for their various assets? Are there "hard and fast" rules for residual values?
3. How would an organization prevent the kind of fraud depicted here?

> Financial Statement Case 9-1

View a link to**Target Corporation's** Fiscal 2015 annual report at http://www.pearsonhighered.com/Horngren. Refer to the Target Corporation financial statements, including Notes 14 and 15. Answer the following questions.

Requirements

1. Which depreciation method does Target Corporation use for reporting in the financial statements? What type of depreciation method does the company probably use for income tax purposes?
2. What was the amount of depreciation and amortization expense for the year ending January 30, 2016?
3. The statement of cash flows reports the cash purchases of property, plant, and equipment. How much were Target's additions to property, plant, and equipment during the year ending January 30, 2016? Did Target record any proceeds from the sale of property, plant, and equipment?

4. What was the amount of accumulated depreciation at January 30, 2016? What was the net book value of property, plant, and equipment for Target as of January 31, 2016?
5. Compute Target's asset turnover ratio for year ending January 30, 2016. Round to two decimal places. How does Target's ratio compare with that of **Kohl's Corporation**?

> Communication Activity 9-1

In 150 words or fewer, explain the different methods that can be used to calculate depreciation. Your explanation should include how to calculate depreciation expense using each method.

> Quick Check Answers

1. d **2.** d **3.** c **4.** b **5.** c **6.** d **7.** d **8.** b **9.** c **10A.** b

Chapter 9
Plant Assets, Natural Resources, and Intangibles

Review Questions

1. Property, plant, and equipment are long-lived, tangible assets used in the operation of a business. Examples include land, buildings, equipment, furniture, and automobiles.

2. The historical cost of a plant asset includes the purchase price plus taxes, purchase commissions, and all other amounts paid to ready the asset for its intended use.

3. Land improvements are depreciable improvements to land, such as fencing, sprinklers, paving, signs, and lighting. Land is not depreciated.

4. Capitalize means that an asset account was debited (increased) because the company acquired an asset. Capitalized assets, except for land, are depreciated over their useful lives.

5. A lump-sum purchase, also called a *basket purchase*, is the purchase of several assets as a group. The total cost paid (100%) is divided among the assets according to their relative market values.

6. A capital expenditure is debited to an asset account because it increases the asset's capacity or efficiency, or extends the asset's useful life. Examples include extraordinary repairs, such as replacing the engine in a delivery truck. Revenue expenditures are debited to an expense account. Examples include routine repairs and maintenance, such as changing the oil or replacing the tires on a delivery truck.

7. Depreciation is the allocation of a plant asset's cost to expense over its useful life. Depreciation matches the expense against the revenue generated from using the asset to measure net income. Useful life is the length of the service period expected from an asset. Residual value is the expected value of a depreciable asset at the end of its useful life. Depreciable cost is the cost of a plant asset minus its estimated residual value.

8. The double-declining-balance method ignores residual value until the last year of depreciation because the calculation is based on book value rather than depreciable cost. In the last year of depreciation, depreciation is calculated as the amount needed to bring the asset to its residual value.

9. A business should match an asset's expense against the revenue that the asset produces when deciding on a depreciation method. For an asset that generates revenue evenly over time, the straight-line method follows the matching principle. The units-of-production method works best for an asset that depreciates due to wear and tear rather than obsolescence. The accelerated method, double-declining-balance, works best for assets that produce more revenue in their early years.

10. Modified Accelerated Cost Recovery System (MACRS) is a method used for tax purposes. Under MACRS, assets are divided into specific classes, such as 3-year, 5-year, 7-year, and 39-year property. Businesses do not get to choose the useful life of the asset. In addition, the MACRS method ignores residual value.

11. When a company makes an accounting change in estimate, generally accepted accounting principles require the business to recalculate the depreciation for the asset in the year of change and in future periods. It does not require that businesses restate prior years' financial statements for this change in estimate. For a change in either estimated asset life or residual value, the asset's remaining depreciable book value is spread over the asset's remaining life.

12. Property, plant and equipment are reported at book value on the balance sheet. Companies may choose to report PP&E as a single amount, with a note to the financial statements that provides detailed information, or companies may provide detailed information on the face of the statement. The cost of the asset and the related accumulated depreciation should be disclosed.

13. Discarding of plant assets involves disposing of the asset for no cash. Selling an asset involves receiving cash in exchange for the asset.

14. Gain or loss is determined by comparing the cash received and the market value of any other assets received with the book value of the plant asset disposed of. A gain occurs when the cash received and the market value of any other assets received is greater than the book value of the disposed plant asset. A loss occurs when the cash received and the market value of any other assets received is less than the book value of the disposed plant asset.

15. Natural resources are assets that come from the earth that are extracted or cut down. Examples include iron ore, oil, natural gas, diamonds, coal, and timber. Depletion is the process by which businesses spread the allocation of a natural resource's cost over its usage.

16. Intangible assets are assets that have no physical form. Instead, these assets convey special rights from patents, copyrights, trademarks, and other creative works.

17. Amortization is the process by which businesses spread the allocation of an intangible asset's cost over its useful life.

18. Goodwill is the excess of the cost of an acquired company over the sum of the market values of its net assets (assets minus liabilities). Goodwill is the value paid above the net worth of the company's assets and liabilities. Goodwill is not amortized. Instead, the acquiring company measures the fair value of its goodwill each year. If the goodwill has increased in value, there is nothing to record. But if goodwill's value has decreased, then the company records an impairment loss and writes the goodwill down.

19. The asset turnover ratio measures how efficiently a business uses its average total assets to generate sales. Net sales / Average total assets.

20A. An exchange has commercial substance if the future cash flows change as a result of the transaction. In other words, if in the future cash flows (receipts of revenue or payment of expenses) of the business will change because of the exchange. Exchanges that have commercial substance require any gain or loss on the transaction to be recognized. The old asset will be removed from the books and the new asset will be recorded at its market value. Exchanges that lack commercial substance ignore any gain or loss on the transaction, except in a few limited situations. The new asset is recorded at the old asset's book value plus cash paid minus cash received instead of at market value.

Short Exercises

S9-1

Purchase price of land		$ 396,000
Add related costs:		
Property taxes in arrears	$ 1,100	
Title insurance	600	
Removal of building	4,600	6,300
Total cost of land		$ 402,300

Date	Accounts and Explanation	Debit	Credit
	Land	402,300	
	Notes Payable		300,000
	Cash		102,300
	To record purchase of land with cash and note payable.		

S9-2

Asset	Market Value	Percentage of Total Value	× Total Purchase Price	= Assigned Cost of Each Asset
Land	$ 110,000	$110,000 / $220,000 = 50%	× $210,000	= $ 105,000
Building	88,000	$88,000 / $220,000 = 40%	× $210,000	= 84,000
Equipment	22,000	$22,000 / $220,000 = 10%	× $210,000	= 21,000
Total	$ 220,000	100%		$ 210,000

Date	Accounts and Explanation	Debit	Credit
	Land	105,000	
	Building	84,000	
	Equipment	21,000	
	Notes Payable		210,000
	To record purchase of land, building, and equipment in exchange for note payable.		

S9-3
Requirement 1

a. Straight-line = (Cost − Residual value) / Useful life
= ($37,000,000 − $5,000,000) / 5 years
= **$6,400,000 per year**

b. Depreciation per unit = (Cost – Residual value) / Useful life in units
= ($37,000,000 − $5,000,000) / 4,000,000 miles
= $8 per mile

Units-of-production = Depreciation per unit × Current year usage
= $8 per mile × 1,400,000 miles
= **$11,200,000 for year 1**

c. Double-declining-balance = (Cost – Accumulated depreciation) × 2 × (1 / Useful life)
= ($37,000,000 − $0) × 2 × (1/ 5 years)
= **$14,800,000 for year 1**

S9-3, cont.
Requirement 2

	Straight-line	Units-of-production	Double-declining-balance
Cost	$ 37,000,000	$ 37,000,000	$ 37,000,000
Less: Accumulated Depreciation	6,400,000	11,200,000	14,800,000
Book value	$ 30,600,000	$ 25,800,000	$ 22,200,000

S9-4
Requirement 1

a.	Straight-line	=	(Cost − Residual value) / Useful life
		=	($60,500,000 − $5,500,000) / 8 years
		=	**$6,875,000 per year**
b.	Depreciation per unit	=	(Cost – Residual value) / Useful life in units
		=	($60,500,000 − $5,500,000) / 5,000,000 miles
		=	$11 per mile
	Units-of-production	=	Depreciation per unit × Current year usage
		=	$11 per mile × 1,100,000 miles
		=	$12,100,000 in Year 1
		=	Depreciation per unit × Current year usage
		=	$11 per mile × 1,200,000 miles
		=	**$13,200,000 in Year 2**
c.	Double-declining-balance	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
		=	($60,500,000 − $0) × 2 × (1/ 8 years)
		=	$15,125,000 in Year 1
		=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
		=	($60,500,000 − $15,125,000) × 2 × (1/ 8 years)
		=	**$11,343,750 in Year 2**

Requirement 2

	Straight-line	Units-of-production	Double-declining-balance
Depreciation Expense – Year 1	$ 6,875,000	$ 12,100,000	$ 15,125,000
Depreciation Expense – Year 2	6,875,000	13,200,000	11,343,750
Total Accumulated Depreciation	$ 13,750,000	$ 25,300,000	$ 26,468,750

S9-5

Straight-line	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	(\$53,400 − \$3,000) / 6 years × (10/12)
	=	**\$7,000**

S9-6
Requirement 1

Straight-line	=	(Cost − Residual value) / Useful life
	=	(\$45,000 − \$0) / 15 years
	=	**\$3,000 per year**

Accumulated depreciation after 6 years	=	\$3,000 per year × 6 years
	=	\$18,000

Book value after 6 years	=	(Cost – Accumulated Depreciation)
	=	\$45,000 − \$18,000
	=	\$27,000

Revised depreciation	=	(Book value − Revised residual value) / Revised useful life remaining
	=	(\$27,000 − \$0) / 5 years
	=	**\$5,400 per year**

Date	Accounts and Explanation	Debit	Credit
End of Year 7	Depreciation Expense—Equipment	5,400	
	Accumulated Depreciation—Equip.		5,400
	To record depreciation on equipment.		

Requirement 2

	Straight-line
Depreciation Expense – Years 1– 6	\$ 18,000
Depreciation Expense – Year 7	5,400
Total Accumulated Depreciation	\$ 23,400

S9-7

Date	Accounts and Explanation	Debit	Credit
June 15	Accumulated Depreciation—Equipment	27,000	
	Equipment		27,000
	Discarded fully depreciated equipment.		

S9-8

Partial year depreciation = $1,920 × 10/12 = $1,600

Market value of assets received		$ 0
Less: Book value of asset disposed of		
Cost	$ 26,920	
Less: Accumulated Depreciation ($25,000 + $1,600)	(26,600)	320
Gain or (Loss)		$ (320)

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Depreciation Expense—Equipment	1,600	
	Accumulated Depreciation—Equipment		1,600
	To record depreciation on equipment.		
31	Accumulated Depreciation—Equipment	26,600	
	Loss on Disposal	320	
	Equipment		26,920
	Discarded equipment with a book value of $320.		

S9-9

Market value of assets received		$ 20,000
Less: Book value of asset disposed of		
Cost	$ 27,500	
Less: Accumulated Depreciation	(10,000)	17,500
Gain or (Loss)		$ 2,500

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	20,000	
	Accumulated Depreciation—Equipment	10,000	
	Equipment		27,500
	Gain on Disposal		2,500
	Sold equipment for cash.		

S9-10

Market value of assets received		$ 4,000
Less: Book value of asset disposed of		
Cost	$ 28,000	
Less: Accumulated Depreciation	(11,000)	17,000
Gain or (Loss)		$ (13,000)

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	4,000	
	Accumulated Depreciation—Equipment	11,000	
	Loss on Disposal	13,000	
	Equipment		28,000
	Sold equipment for cash.		

S9-11
Requirement 1
Units-of-production is the method used to compute depletion.

Requirement 2

Depletion per unit	=	(Cost – Residual value) / Estimated total units
	=	($27,000,000 − $0) / 3,000,000 barrels
	=	$9 per barrel
Depletion expense	=	Depletion per unit × Number of units extracted
	=	$9 per barrel × 500,000 barrels
	=	$4,500,000

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depletion Expense—Oil Reserves	4,500,000	
	Accumulated Depletion—Oil Reserves		4,500,000
	To record depletion.		

S9-12
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 1	Patent	153,600	
	Cash		153,600
	To record purchase of patent.		

Requirement 2

Amortization expense	=	(Cost – Residual value) / Useful life
	=	($153,600 − $0) / 8 years × 3/12
	=	4,800

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Amortization Expense—Patent	4,800	
	Patent		4,800
	To record amortization of patent.		

S9-13
Requirement 1

Purchase price to acquire *Thrifty Nickel*		$ 230,000
Market value of *Thrifty Nickel's* assets	$ 100,000	
Less: *Thrifty Nickel's* liabilities	(70,000)	
Market value of *Thrifty Nickel's* net assets		30,000
Goodwill		$ 200,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Assets	100,000	
	Goodwill	200,000	
	Liabilities		70,000
	Cash		230,000
	To record purchase of Thrifty Nickel.		

S9-14

Asset turnover ratio	=	Net sales / Average total assets
	=	$55,600,000 / [($52,800,000 + $98,500,000) / 2]
	=	$55,600,000 / $75,650,000
	=	0.73 times (rounded)

S9A-15

Market value of assets received			$ 3,900
Less:			
Book value of asset exchanged			
Cost	$ 2,500		
Less: Accumulated depreciation	(1,600)	$ 900	
Cash paid		2,100	3,000
Gain or (Loss)			$ 900

S9A-15, cont.

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Computer Equipment (new)	3,900	
	Accumulated Depreciation—Computer Equipment	1,600	
	Computer Equipment (old)		2,500
	Cash		2,100
	Gain on Disposal		900
	Exchanged old computer equipment and cash for new computer equipment.		

S9A-16

Market value of assets received			$ 25,100
Less:			
Book value of asset exchanged			
Cost	$ 22,000		
Less: Accumulated depreciation	(19,000)	$ 3,000	
Cash paid		23,200	26,200
Gain or (Loss)			$ (1,100)

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Equipment (new)	25,100	
	Accumulated Depreciation—Equipment	19,000	
	Loss on Disposal	1,100	
	Equipment (old)		22,000
	Cash		23,200
	Exchanged old equipment and cash for new equipment.		

E9-17
Requirement 1

	Land	Land Improvements	Building
Purchase price	$ 65,000		
Note payable	250,000		
Property tax	5,000		
Title insurance	4,000		
Remove building	9,000		
Construct building			$ 400,000
Fence		$ 54,000	
Sign		12,000	
Lighting		8,000	
Totals	$ 333,000	$ 74,000	$ 400,000

Requirement 2

Lawson will depreciate Land Improvements and Building.

E9-18

Asset	Market Value	Percentage of Total Value	× Total Purchase Price	= Assigned Cost of Each Asset
Lot 1	$ 144,000	$144,000 / $480,000 = 30%	× $355,000	= $ 106,500
Lot 2	96,000	$96,000 / $480,000 = 20%	× $355,000	= 71,000
Lot 3	240,000	$240,000 / $480,000 = 50%	× $355,000	= 177,500
Total	$ 480,000	100%		$ 355,000

Date	Accounts and Explanation	Debit	Credit
	Land—Lot 1	106,500	
	Land—Lot 2	71,000	
	Land—Lot 3	177,500	
	Cash		355,000
	To record purchase of lots for cash.		

E9-19

a. Capital expenditure
b. Revenue expenditure
c. Capital expenditure
d. Revenue expenditure
e. Capital expenditure
f. Capital expenditure
g. Capital expenditure
h. Capital expenditure
i. Capital expenditure

E9-20
Requirement 1

Depreciable cost = Cost − Residual value = $33,000 − $6,000 = $27,000

Straight-Line Depreciation Schedule						
		Depreciation for the Year				
Date	**Asset Cost**	**Depreciable Cost**	**Depreciation Rate**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/02/18	$33,000					$ 33,000
12/31/18		$ 27,000	1 / 4	$ 6,750	$ 6,750	26,250
12/31/19		27,000	1 / 4	6,750	13,500	19,500
12/31/20		27,000	1 / 4	6,750	20,250	12,750
12/31/21		27,000	1 / 4	6,750	27,000	6,000

Depreciation per unit = (Cost – Residual value) / Useful life in units
= ($33,000 − $6,000) / 6,750 hours
= $4 per hour

Units-of-Production Depreciation Schedule						
		Depreciation for the Year				
Date	**Asset Cost**	**Depreciation per Unit**	**Number of Units**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/02/18	$ 33,000					$ 33,000
12/31/18		$ 4	675	$ 2,700	$ 2,700	30,300
12/31/19		4	2,025	8,100	10,800	22,200
12/31/20		4	2,700	10,800	21,600	11,400
12/31/21		4	1,350	5,400	27,000	6,000

E9-20, cont.
Requirement 1, cont.

Double-Declining-Balance Depreciation Schedule							
		Depreciation for the Year					
Date	Asset Cost	Book Value	DDB Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/02/18	$ 33,000					$ 33,000
12/31/18		$ 33,000	2 × (1 / 4)	$ 16,500	$ 16,500	16,500
12/31/19		16,500	2 × (1 / 4)	8,250	24,750	8,250
12/31/20		8,250		2,250*	27,000	6,000
12/31/21				0	27,000	6,000

*3rd year depreciation is the "plug figure" needed to reduce book value to residual value ($8,250 - $6,000)

Requirement 2

The units-of-production method tracks the wear and tear on the equipment most closely.

E9-21

Straight-line depreciation = (Cost − Residual value) / Useful life
= ($540,000 − $100,000) / 40 years
= **$11,000 per year**

Accumulated depreciation after 15 years = $11,000 per year × 15 years
= $165,000

Book value after 15 years = (Cost – Accumulated Depreciation)
= $540,000 − $165,000
= $375,000

Revised depreciation = (Book value − Revised residual value) / Revised useful life remaining
= ($375,000 − $88,000) / (35 total years – 15 previous years)
= **$14,350 per year**

Date	Accounts and Explanation	Debit	Credit
Year 15	Depreciation Expense—Building	11,000	
	Accumulated Depreciation—Building		11,000
	To record depreciation on building.		
Year 16	Depreciation Expense—Building	14,350	
	Accumulated Depreciation—Building		14,350
	To record depreciation on building.		

E9-22

Double-declining-balance	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	($17,000 − $0) × 2 × (1/5 years)
	=	$6,800 in year 1
	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	($17,000 − $6,800) × 2 × (1/ 5 years) × 10/12
	=	**$3,400 in year 2**

Market value of assets received		$ 7,600
Less: Book value of asset disposed of		
Cost	$ 17,000	
Less: Accumulated Depreciation ($6,800 + $3,400)	(10,200)	6,800
Gain or (Loss)		$ 800

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Depreciation Expense—Fixtures	3,400	
	Accumulated Depreciation—Fixtures		3,400
	To record depreciation on fixtures.		
31	Cash	7,600	
	Accumulated Depreciation—Fixtures	10,200	
	Fixtures		17,000
	Gain on Disposal		800
	Sold fixtures for cash.		

E9-23

Straight-line depreciation	=	(Cost − Residual value) / Useful life
	=	($37,800 − $9,000) / 6 years
	=	$4,800 per year (2016 and 2017)
	=	(Cost − Residual value) / Useful life
	=	($37,800 − $9,000) / 6 years × 5/12
	=	**$2,000 per partial year (2018)**

Market value of assets received		$ 24,200
Less: Book value of asset disposed of		
Cost	$ 37,800	
Less: Accumulated Depreciation ($4,800 + $4,800 + $2,000)	(11,600)	26,200
Gain or (Loss)		$ (2,000)

Date	Accounts and Explanation	Debit	Credit
May 31	Depreciation Expense—Fixtures	2,000	
	Accumulated Depreciation—Fixtures		2,000
	To record depreciation on fixtures.		
31	Cash	24,200	
	Accumulated Depreciation—Fixtures	11,600	
	Loss on Disposal	2,000	
	Fixtures		37,800
	Sold fixtures for cash.		

E9-24

Purchase price of minerals		$ 462,300
Add related costs:		
Filing fee	$ 900	
License	1,800	
Geological survey	55,000	57,700
Total cost of minerals		$ 520,000

Depletion per unit	=	(Cost – Residual value) / Estimated total units
	=	($520,000 – $0) / 400,000 tons
	=	$1.30 per ton
Depletion expense	=	Depletion per unit × Number of units extracted
	=	$1.30 per ton × 50,000 tons
	=	$65,000

Date	Accounts and Explanation	Debit	Credit
a.	Minerals	462,300	
	Cash		462,300
	To record purchase of mineral rights.		
b.	Minerals	57,700	
	Cash		57,700
	To record payment of costs associated with purchase of minerals.		
c.	Depletion Expense—Minerals	65,000	
	Accumulated Depletion—Minerals		65,000
	To record depletion.		

E9-25
Requirement 1

Amortization expense = (Cost – Residual value) / Useful life
= ($200,000 − $0) / 8 years
= $25,000

Date	Accounts and Explanation	Debit	Credit
	Patent	200,000	
	Cash		200,000
	To record purchase of patent.		
	Amortization Expense—Patent	25,000	
	Patent		25,000
	To record amortization.		

Requirement 2

Accumulated amortization after 4 years = $25,000 per year × 4 years
= $100,000

Book value after 4 years = (Cost – Accumulated Amortization)
= $200,000 − $100,000
= $100,000

Revised amortization = (Book value − Revised residual value) / Revised useful life remaining
= ($100,000 − $0) / 2 years
= **$50,000 per year**

Date	Accounts and Explanation	Debit	Credit
	Amortization Expense—Patent	50,000	
	Patent		50,000
	To record amortization.		

E9-26
Requirement 1

Purchase price to acquire Kelleher		$ 9,000,000
Market value of Kelleher's assets	$ 20,000,000	
Less: Kelleher's liabilities	(12,000,000)	
Market value of Kelleher's net assets		8,000,000
Goodwill		$ 1,000,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Assets	20,000,000	
	Goodwill	1,000,000	
	Liabilities		12,000,000
	Cash		9,000,000
	To record purchase of Kelleher.		

E9-27

	Dec. 31, 2018	Dec. 31, 2017
Cash	$ 31,000	$ 30,000
Accounts Receivable	68,000	65,000
Merchandise Inventory	80,000	79,000
Prepaid Expenses	16,000	5,000
Property, plant, and equipment, net	175,000	18,000
Total Assets	$ 370,000	$ 197,000

Asset turnover ratio	=	Net sales / Average total assets
	=	$441,000 / [($370,000 + $197,000) / 2]
	=	$441,000 / $283,500
	=	1.56 times (rounded)

E9A-28
Requirement 1

Market value of assets received			$133,000
Less:			
Book value of asset exchanged			
Cost	$ 91,000		
Less: Accumulated depreciation	(68,000)	$ 23,000	
Cash paid		110,000	(133,000)
Gain or (Loss)			$ 0

Date	Accounts and Explanation	Debit	Credit
	Fixtures (new)	133,000	
	Accumulated Depreciation—Fixtures	68,000	
	Fixtures (old)		91,000
	Cash		110,000
	Exchanged old fixtures and cash for new fixtures.		

Requirement 2

Market value of assets received			$ 126,000
Less:			
Book value of asset exchanged			
Cost	$ 91,000		
Less: Accumulated depreciation	(68,000)	$ 23,000	
Cash paid		110,000	(133,000)
Gain or (Loss)			$ (7,000)

Date	Accounts and Explanation	Debit	Credit
	Fixtures (new)	126,000	
	Accumulated Depreciation—Fixtures	68,000	
	Loss on Disposal	7,000	
	Fixtures (old)		91,000
	Cash		110,000
	Exchanged old fixtures and cash for new fixtures.		

E9A-29
Requirement 1

Depreciation per unit	=	(Cost – Residual value) / Useful life in units
	=	($360,000 – $90,000) / 1,000,000 miles
	=	$0.27 per mile
Units-of-production	=	Depreciation per unit × Current year usage
	=	$0.27 per mile × 80,000 miles
	=	$21,600 in 2015
	=	Depreciation per unit × Current year usage
	=	$0.27 per mile × 120,000 miles
	=	$32,400 in 2016
	=	Depreciation per unit × Current year usage
	=	$0.27 per mile × 160,000 miles
	=	$43,200 in 2017
	=	Depreciation per unit × Current year usage
	=	$0.27 per mile × 44,000 miles
	=	$11,880 in 2018
Total accumulated depreciation	=	$21,600 + $32,400 + $43,200 + $11,880
	=	$109,080

Date	Accounts and Explanation	Debit	Credit
Mar. 15	Depreciation Expense—Truck	11,880	
	Accumulated Depreciation—Truck		11,880
	To record depreciation on truck.		

E9A-29, cont.
Requirement 2

Market value of assets received			**$270,920**
Less:			
Book value of asset exchanged			
Cost	$ 360,000		
Less: Accumulated depreciation	(109,080)*	$ 250,920	
Cash paid		20,000	270,920
Gain or (Loss)			$ 0

**from Requirement 1*

If the fair market value of the old truck is equal to its net book value, then the "trade-in" value of the old truck is equal to the book value and there is no gain or loss on the exchange. Therefore, the cost of the new truck is **$270,920**—the book value of the old truck plus the cash paid.

Requirement 3

Date	Accounts and Explanation	Debit	Credit
Mar. 15	Truck (new)	270,920	
	Accumulated Depreciation—Truck	109,080	
	Truck (old)		360,000
	Cash		20,000
	Exchanged old truck and cash for new truck.		

Problems (Group A)

P9-30A
Requirement 1

	Land	Land Improvements	Building	Furniture
Purchase price	$ 80,000			
Real estate taxes	6,300			
Dirt and earthmoving	9,000			
Title insurance	3,200			
Fence		$ 9,600		
Building permit			$ 1,000	
Architect's fee			20,700	
Signs		9,300		
Building materials			215,000	
Building labor			175,000	
Interest on construction loan			9,400	
Parking lots		28,500		
Lights for parking lots		11,200		
Salary of construction supervisor		10,000	40,000	
Furniture				$ 11,200
Transportation of furniture				2,200
Additional fencing		6,600		
Totals	$ 98,500	$ 75,200	$ 461,100	$ 13,400

Requirement 2

Straight-line	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
Land Improvements	=	($75,200 − $0) / 15 years × (3/12)
	=	**$1,253 (rounded)**
Building	=	($461,100 − $0) / 40 years × (3/12)
	=	**$2,882 (rounded)**
Furniture	=	($13,400 − $0) / 10 years × (3/12)
	=	**$335**

P9-30A, cont.
Requirement 2, cont.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Land Improvements	1,253	
	Accumulated Depreciation—Land Improvements		1,253
	To record depreciation on land improvements.		
31	Depreciation Expense—Building	2,882	
	Accumulated Depreciation—Building		2,882
	To record depreciation on building.		
31	Depreciation Expense—Furniture	335	
	Accumulated Depreciation—Furniture		335
	To record depreciation on furniture.		

P9-31A
Requirement 1

Purchase price of truck		$ 100,000
Add related costs:		
Painting	$ 3,000	
Tires	600	
Engine overhaul	10,400	14,000
Total cost of truck		$ 114,000

Depreciable cost = Cost − Residual value = $114,000 − $12,000 = $102,000

Straight-Line Depreciation Schedule						
		Depreciation for the Year				
Date	Asset Cost	Depreciable Cost	Depreciation Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/03/18	$ 114,000					$ 114,000
12/31/18		$ 102,000	1 / 5	$ 20,400	$ 20,400	93,600
12/31/19		102,000	1 / 5	20,400	40,800	73,200
12/31/20		102,000	1 / 5	20,400	61,200	52,800
12/31/21		102,000	1 / 5	20,400	81,600	32,400
12/31/22		102,000	1 / 5	20,400	102,000	12,000

P9-31A, cont.
Requirement 1, cont.

Depreciation per unit	=	(Cost – Residual value) / Useful life in units
	=	($114,000 − $12,000) / 136,000 miles
	=	$0.75 per mile

Units-of-Production Depreciation Schedule

		Depreciation for the Year				
Date	**Asset Cost**	**Depreciation per Unit**	**Number of Units**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/03/18	$ 114,000					$ 114,000
12/31/18		$ 0.75	32,000	$ 24,000	$ 24,000	90,000
12/31/19		0.75	32,000	24,000	48,000	66,000
12/31/20		0.75	32,000	24,000	72,000	42,000
12/31/21		0.75	32,000	24,000	96,000	18,000
12/31/22		0.75	8,000	6,000	102,000	12,000

Double-Declining-Balance Depreciation Schedule

		Depreciation for the Year				
Date	**Asset Cost**	**Book Value**	**DDB Rate**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/03/18	$ 114,000					$ 114,000
12/31/18		$ 114,000	2 × (1 / 5)	$ 45,600	$ 45,600	68,400
12/31/19		68,400	2 × (1 / 5)	27,360	72,960	41,040
12/31/20		41,040	2 × (1 / 5)	16,416	89,376	24,624
12/31/21		24,624	2 × (1 / 5)	9,850	99,226	14,774
12/31/22		14,774		2,774*	102,000	12,000

*5th year depreciation is the "plug figure" needed to reduce book value to residual value ($14,774 − $12,000)

Requirement 2
The depreciation method that reports the highest net income in the first year is the straight-line method. It produces the lowest depreciation expense ($20,400) and therefore the highest net income.

P9-32A

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Office Equipment	113,000	
	Cash		80,000
	Note Payable		33,000
	To record purchase of office equipment.		
Apr. 1	Land	232,500	
	Communication Equipment	77,500	
	Cash		310,000
	To record purchase of land and comm. equipment.		
Sep. 1	Depreciation Expense—Building	8,250	
	Accumulated Depreciation—Building		8,250
	To record depreciation on building.		
	Cash	420,000	
	Accumulated Depreciation—Building	293,250	
	Building		520,000
	Gain on Disposal		193,250
	To record sale of building.		
Dec. 31	Depreciation Expense—Communication Equipment	11,625	
	Accumulated Depreciation—Comm. Equipment		11,625
	To record depreciation on communication equipment.		
31	Depreciation Expense—Office Equipment	45,200	
	Accumulated Depreciation—Office Equipment		45,200
	To record depreciation on office equipment.		

Calculations:

Apr. 1 – Acquisition of land and communication equipment:

Asset	Market Value	Percentage of Total Value	× Total Purchase Price	= Assigned Cost of Each Asset
Land	$ 244,125	$244,125 / $325,500 = 75%	× $310,000	= $ 232,500
Comm. Equip.	81,375	$81,375 / $325,500 = 25%	× $310,000	= 77,500
Total	$ 325,500	100%		$310,000

P9-32A, cont.

Sep. 1 – Sale of building

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	($520,000 − $25,000) / 40 years × 8/12
	=	**$8,250 per partial year (2018)**

Market value of assets received		$ 420,000
Less: Book value of asset disposed of		
Cost	$ 520,000	
Less: Accumulated Depreciation ($285,000 + $8,250)	(293,250)	226,750
Gain or (Loss)		$ 193,250

Dec. 31 – Depreciation on communication equipment

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	($77,500 − $0) / 5 years × 9/12
	=	**$11,625 per partial year (2018)**

Dec. 31 – Depreciation on office equipment

Double-declining-balance depreciation	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	($113,000 − $0) × 2 × (1/5 years)
	=	**$45,200 in 2018**

P9-33A

Purchase price of oil reserves		\$ 6,600,000
Add related costs:		
Geological tests	\$ 570,000	
Drilling preparation	450,000	1,020,000
Total cost of oil reserves		\$ 7,620,000

Depletion per unit	=	(Cost – Residual value) / Estimated total units
	=	(\$7,620,000 – \$0) / 1,000,000 barrels
	=	\$7.62 per barrel
Depletion expense	=	Depletion per unit × Number of units extracted
	=	\$7.62 per barrel × 72,000 barrels
	=	\$548,640

Date	Accounts and Explanation	Debit	Credit
	Oil and Gas Properties	6,600,000	
	Cash		6,600,000
	To record purchase of oil reserves.		
	Oil and Gas Properties	1,020,000	
	Cash		1,020,000
	To record payment of costs associated with purchase of oil reserves.		
	Depletion Expense—Oil and Gas Properties	548,640	
	Accumulated Depletion—Oil and Gas Properties		548,640
	To record depletion.		

P9-34A
Requirement 1

Purchase price to acquire Sheldon Wireless ($440,000 + $660,000)		$1,100,000
Market value of Sheldon Wireless's assets	$ 1,400,000	
Less: Sheldon Wireless's liabilities	(530,000)	
Market value of Sheldon Wireless's net assets		870,000
Goodwill		$ 230,000

Date	Accounts and Explanation	Debit	Credit
	Assets	1,400,000	
	Goodwill	230,000	
	Liabilities		530,000
	Cash		440,000
	Note Payable		660,000
	To record purchase of Sheldon Wireless.		

Requirement 2

The acquisition identifies the asset *goodwill.*

Midland States Telecom should measure the fair value of this asset each year. If this asset has increased in value, Midland States Telecom should record nothing. If the value of the asset has decreased, Midland States Telecom should record an impairment loss and write down goodwill.

P9A-35A

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Office Equipment (new)	133,000	
	Accumulated Depreciation—Office Equipment	72,000	
	Office Equipment (old)		127,000
	Cash		70,000
	Gain on Disposal		8,000
	To record exchange of office equipment.		
Apr. 1	Depreciation Expense—Equipment	900	
	Accumulated Depreciation—Equipment		900
	To record partial year depreciation on equipment.		
1	Cash	6,100	
	Accumulated Depreciation—Equipment	8,900	
	Loss on Disposal	3,000	
	Equipment		18,000
	To record sale of equipment.		
Dec. 31	Depreciation Expense—Office Equipment	66,500	
	Accumulated Depreciation—Office Equipment		66,500
	To record depreciation on office equipment.		

Calculations:

Jan. 1 – Exchange of office equipment

Market value of assets received			$ 133,000
Less:			
Book value of asset exchanged			
Cost	$ 127,000		
Less: Accumulated depreciation	(72,000)	$ 55,000	
Cash paid		70,000	125,000
Gain or (Loss)			$ 8,000

P9-35A, cont.

Apr. 1 – Sale of equipment

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	($18,000 − $0) / 5 years × 3/12
	=	$900 per partial year (2018)

Market value of assets received		$ 6,100
Less: Book value of asset disposed of		
Cost	$ 18,000	
Less: Accumulated Depreciation ($8,000 + $900)	(8,900)	9,100
Gain or (Loss)		$ (3,000)

Dec. 31 – Depreciation on office equipment

Double-declining-balance depreciation	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	($133,000 – $0) × 2 × (1/4 years)
	=	$66,500

Problems (Group B)

P9-36B
Requirement 1

	Land	Land Improvements	Building	Furniture
Purchase price	$ 86,000			
Real estate taxes	6,300			
Dirt and earthmoving	8,400			
Title insurance	3,400			
Fence		$ 9,600		
Building permit			$ 900	
Architect's fee			20,100	
Signs		9,000		
Building materials			217,000	
Building labor			172,000	
Interest on construction loan			9,500	
Parking lots		29,400		
Lights for parking lots		11,600		
Salary of construction supervisor		16,000	64,000	
Furniture				$ 11,700
Transportation of furniture				1,900
Additional fencing		6,900		
Totals	$ 104,100	$ 82,500	$ 483,500	$ 13,600

Requirement 2

Straight-line	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
Land Improvements	=	($82,500 − $0) / 15 years × (4/12)
	=	**$1,833 (rounded)**
Building	=	($483,500 − $0) / 40 years × (4/12)
	=	**$4,029 (rounded)**
Furniture	=	($13,600 − $0) / 10 years × (4/12)
	=	**$453 (rounded)**

P9-36B, cont.
Requirement 2, cont.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Land Improvements	1,833	
	Accumulated Depreciation—Land Improvements		1,833
	To record depreciation on land improvements.		
31	Depreciation Expense—Building	4,029	
	Accumulated Depreciation—Building		4,029
	To record depreciation on building.		
31	Depreciation Expense—Furniture	453	
	Accumulated Depreciation—Furniture		453
	To record depreciation on furniture.		

P9-37B
Requirement 1

Purchase price of truck		$ 67,000
Add related costs:		
Painting	$ 3,000	
Tires	1,200	
Engine overhaul	3,500	7,700
Total cost of truck		$ 74,700

Depreciable cost = Cost − Residual value = $74,700 − $5,100 = $69,600

Straight-Line Depreciation Schedule							
		Depreciation for the Year					
Date	Asset Cost	Depreciable Cost	Depreciation Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/03/18	$ 74,700					$ 74,700
12/31/18		$ 69,600	1 / 5	$ 13,920	$ 13,920	60,780
12/31/19		69,600	1 / 5	13,920	27,840	46,860
12/31/20		69,600	1 / 5	13,920	41,760	32,940
12/31/21		69,600	1 / 5	13,920	55,680	19,020
12/31/22		69,600	1 / 5	13,920	69,600	5,100

P9-37B, cont.
Requirement 1, cont.

Depreciation per unit	=	(Cost – Residual value) / Useful life in units
	=	($74,700 − $5,100) / 92,800 miles
	=	$0.75 per mile

Units-of-Production Depreciation Schedule

		Depreciation for the Year				
Date	**Asset Cost**	**Depreciation per Unit**	**Number of Units**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/03/18	$ 74,700					$ 74,700
12/31/18		$ 0.75	20,000	$ 15,000	15,000	59,700
12/31/19		0.75	20,000	15,000	30,000	44,700
12/31/20		0.75	20,000	15,000	45,000	29,700
12/31/21		0.75	20,000	15,000	60,000	14,700
12/31/22		0.75	12,800	9,600	69,600	5,100

Double-Declining-Balance Depreciation Schedule

		Depreciation for the Year				
Date	**Asset Cost**	**Book Value**	**DDB Rate**	**Depreciation Expense**	**Accumulated Depreciation**	**Book Value**
1/03/18	$ 74,700					$ 74,700
12/31/18		$ 74,700	2 × (1 / 5)	$ 29,880	$ 29,880	44,820
12/31/19		44,820	2 × (1 / 5)	17,928	47,808	26,892
12/31/20		26,892	2 × (1 / 5)	10,757	58,565	16,135
12/31/21		16,135	2 × (1 / 5)	6,454	65,019	9,681
12/31/22		9,681		4,581*	69,600	5,100

*5th year depreciation is the "plug figure" needed to reduce book value to residual value ($9,681 − $5,100)

Requirement 2
The depreciation method that reports the highest net income in the first year is the straight-line method. It produces the lowest depreciation expense ($13,920) and therefore the highest net income.

P9-38B

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Office Equipment	117,000	
	Cash		77,000
	Note Payable		40,000
	To record purchase of office equipment.		
Apr. 1	Land	262,500	
	Communication Equipment	87,500	
	Cash		350,000
	To record purchase of land and comm. equipment.		
Sep. 1	Depreciation Expense—Building	8,250	
	Accumulated Depreciation—Building		8,250
	To record depreciation on building.		
	Cash	390,000	
	Accumulated Depreciation—Building	293,250	
	Building		520,000
	Gain on Disposal		163,250
	To record sale of building.		
Dec. 31	Depreciation Expense—Communication Equipment	13,125	
	Accumulated Depreciation—Comm. Equipment		13,125
	To record depreciation on communication equipment.		
31	Depreciation Expense—Office Equipment	46,800	
	Accumulated Depreciation—Office Equipment		46,800
	To record depreciation on office equipment.		

Calculations:

Apr. 1 – Acquisition of land and communication equipment:

Asset	Market Value	Percentage of Total Value	× Total Purchase Price	= Assigned Cost of Each Asset
Land	$ 275,625	$275,625 / $367,500 = 75%	× $350,000	= $ 262,500
Comm. Equip.	91,875	$91,875 / $367,500 = 25%	× $350,000	= 87,500
Total	$ 367,500	100%		$ 350,000

P9-38B, cont.

Sep. 1 – Sale of building

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	($520,000 − $25,000) / 40 years × 8/12
	=	$8,250 per partial year (2018)

Market value of assets received		$ 390,000
Less: Book value of asset disposed of		
Cost	$ 520,000	
Less: Accumulated Depreciation ($285,000 + $8,250)	(293,250)	226,750
Gain or (Loss)		$ 163,250

Dec. 31 – Depreciation on communication equipment

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	($87,500 − $0) / 5 years × 9/12
	=	$13,125 per partial year (2018)

Dec. 31 – Depreciation on office equipment

Double-declining-balance depreciation	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	($117,000 − $0) × 2 × (1/5 years)
	=	$46,800 in 2018

P9-39B

Purchase price of oil reserves		$ 6,400,000
Add related costs:		
Geological tests	$ 510,000	
Drilling preparation	470,000	980,000
Total cost of oil reserves		$ 7,380,000

Depletion per unit	=	(Cost – Residual value) / Estimated total units
	=	($7,380,000 − $0) / 400,000 barrels
	=	$18.45 per barrel
Depletion expense	=	Depletion per unit × Number of units extracted
	=	$18.45 per barrel × 75,000 barrels
	=	$1,383,750

Date	Accounts and Explanation	Debit	Credit
	Oil and Gas Properties	6,400,000	
	Cash		6,400,000
	To record purchase of oil reserves.		
	Oil and Gas Properties	980,000	
	Cash		980,000
	To record payment of costs associated with purchase of oil reserves.		
	Depletion Expense—Oil and Gas Properties	1,383,750	
	Accumulated Depletion—Oil and Gas Properties		1,383,750
	To record depletion.		

P9-40B
Requirement 1

Purchase price to acquire Surety Wireless ($280,000 + $420,000)		$ 700,000
Market value of Surety Wireless's assets	$1,000,000	
Less: Surety Wireless's liabilities	(510,000)	
Market value of Surety Wireless's net assets		490,000
Goodwill		$ 210,000

Date	Accounts and Explanation	Debit	Credit
	Assets	1,000,000	
	Goodwill	210,000	
	Liabilities		510,000
	Cash		280,000
	Note Payable		420,000
	To record purchase of Surety Wireless.		

Requirement 2

The acquisition identifies the asset *goodwill.*

Core Telecom should measure the fair value of this asset each year. If this asset has increased in value, Core should record nothing. If the value of the asset has decreased, Core should record an impairment loss and write down goodwill.

P9A-41B

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Office Equipment (new)	116,000	
	Accumulated Depreciation—Office Equipment	74,000	
	Office Equipment (old)		129,000
	Cash		55,000
	Gain on Disposal		6,000
	To record exchange of office equipment.		
Apr. 1	Depreciation Expense—Equipment	600	
	Accumulated Depreciation—Equipment		600
	To record partial year depreciation on equipment.		
1	Cash	7,100	
	Accumulated Depreciation—Equipment	1,600	
	Loss on Disposal	3,300	
	Equipment		12,000
	To record sale of equipment.		
Dec. 31	Depreciation Expense—Office Equipment	58,000	
	Accumulated Depreciation—Office Equipment		58,000
	To record depreciation on office equipment.		

Calculations:

Jan. 1 – Exchange of office equipment

Market value of assets received			$ 116,000
Less:			
Book value of asset exchanged			
Cost	$ 129,000		
Less: Accumulated depreciation	(74,000)	$ 55,000	
Cash paid		55,000	110,000
Gain or (Loss)			$ 6,000

P9-41B, cont.

Apr. 1 – Sale of equipment

Straight-line depreciation	=	(Cost − Residual value) / Useful life × (Number of Months / 12)
	=	(\$12,000 − \$0) / 5 years × 3/12
	=	\$600 per partial year (2018)

Market value of assets received		\$ 7,100
Less: Book value of asset disposed of		
Cost	\$ 12,000	
Less: Accumulated Depreciation (\$1,000 + \$600)	(1,600)	10,400
Gain or (Loss)		\$ (3,300)

Dec. 31 – Depreciation on office equipment

Double-declining-balance depreciation	=	(Cost – Accumulated depreciation) × 2 × (1 / Useful life)
	=	(\$116,000 – \$0) × 2 × (1/4 years)
	=	\$58,000

Excel Skill Problem

P9-42

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

tbd

Continuing Problem

P9-43
Requirement 1

Monthly depreciation expense on Computer:

Double-declining-balance depreciation = (Cost – Accumulated depreciation) × 2 × (1 / Useful life) × (Number of Months / 12)

= ($3,600 − $0) × 2 × (1/3 years) × 1/12
= $200 per month in Year 1

Monthly depreciation expense on Office Furniture:

Straight-line depreciation = (Cost − Residual value) / Useful life × (Number of Months / 12)
= ($3,000 − $600) / 5 years × 1/12
= $40 per month

Requirement 2

Asset	Cost	Monthly Depreciation Expense	Months Depreciated in 2018	Accumulated Depreciation 12/31/18	Book Value 12/31/18
Canoes	$ 4,800	$ 100	2	$ 200	$ 4,600
Land	85,000		0		85,000
Building	35,000	500	1	500	34,500
Canoes	7,200	150	1	150	7,050
Totals	$132,000	$750		$850	$131,150

Asset	Cost	Accum. Deprn. 12/31/18	Book Value 12/31/18	Monthly Deprn. Expense 2019	Months Depreciated in 2019 (Jan. – Jun.)	Accum. Deprn. 6/30/19	Book Value 6/30/19
Canoes	$ 4,800	$ 200	$ 4,600	$ 100	6	$ 800	$ 4,000
Land	85,000		85,000				85,000
Building	35,000	500	34,500	500	6	3,500	31,500
Canoes	7,200	150	7,050	150	6	1,050	6,150
Computer	3,600			200	4	800	2,800
Office Furniture	3,000			40	4	160	2,840
Totals	$ 138,600	$ 850	$ 131,150	$ 990		$ 6,310	$ 132,290

P9-43, cont.
Requirement 3

CANYON CANOE COMPANY			
Balance Sheet – Partial			
June 30, 2019			
Assets			
Property, Plant, and Equipment:			
Land		85,000	
Building	$ 35,000		
Less: Accu. Depr.—Building	(3,500)	31,500	
Canoes	12,000		
Less: Accu. Depr.—Canoes	(1,850)	10,150	
Computer	3,600		
Less: Accu. Depr.—Computer	(800)	2,800	
Office Furniture	3,000		
Less: Accu. Depr.—Offc. Furn.	(160)	2,840	
Total Property, Plant, and Equipment			132,290

Comprehensive Problem for Chapters 7-9

Requirement 1

Date	Accounts	Debit	Credit
a.	Cash	500,000	
	Common Stock		500,000
b.	Franchise	50,000	
	Cash		50,000
c.	Land	100,000	
	Building	500,000	
	Cash		200,000
	Notes Payable		400,000
d.	Store Fixtures	75,000	
	Cash		75,000
e.	Office Equipment	45,000	
	Cash		45,000
f.	Office Supplies	600	
	Cash		600
g.	Prepaid Insurance	3,600	
	Cash		3,600
h.	Merchandise Inventory	425,000	
	Accounts Payable		425,000
i.	Petty Cash	150	
	Cash		150
j.	Accounts Receivable	215,000	
	Sales Revenue		215,000
	Cost of Goods Sold	86,000	
	Merchandise Inventory		86,000

Comprehensive Problem, cont.
Requirement 1, cont.

Date	Accounts	Debit	Credit
k.	Note Receivable—Davis Contracting	150,000	
	Sales Revenue		150,000
	Cost of Goods Sold	65,000	
	Merchandise Inventory		65,000
l.	Cash	78,400	
	Credit Card Expense ($80,000 × 0.02)	1,600	
	Sales Revenue		80,000
	Cost of Goods Sold	35,000	
	Merchandise Inventory		35,000
m.	Cash	215,000	
	Accounts Receivable		215,000
n.	Merchandise Inventory	650,000	
	Accounts Payable		650,000
o.	Accounts Payable	300,000	
	Cash		300,000
p.	Cash	350,000	
	Sales Revenue		350,000
	Cost of Goods Sold	175,000	
	Merchandise Inventory		175,000
q.	Cash	156,000	
	Interest Revenue ($150,000 × 0.08 × 6/12)		6,000
	Notes Receivable—Davis Contracting		150,000
r.	Notes Receivable—Leard Contracting	265,000	
	Sales Revenue		265,000
	Cost of Goods Sold	130,000	
	Merchandise Inventory		130,000

Comprehensive Problem, cont.
Requirement 1, cont.

Date	Accounts	Debit	Credit
s.	Accounts Payable	500,000	
	Cash		500,000
t.	Accounts Receivable	985,000	
	Sales Revenue		985,000
	Cost of Goods Sold	395,000	
	Merchandise Inventory		395,000
u.	Cash	715,000	
	Accounts Receivable		715,000
v.	Salaries Expense	180,000	
	Utilities Expense	12,650	
	Cash		192,650
w.	Office Supplies	85	
	Cash Over and Short	3	
	Cash ($150 – $62)		88
x.	Dividends	5,000	
	Cash		5,000
y.	Franchise Fee Expense ($2,045,000 × 5%)	102,250	
	Cash		102,250

Comprehensive Problem, cont.
Requirements 2, 3, and 7

Cash

a.	500,000	50,000	b.
l.	78,400	200,000	c.
m.	215,000	75,000	d.
p.	350,000	45,000	e.
q.	156,000	600	f.
u.	715,000	3,600	g.
		150	i.
		300,000	o.
		500,000	s.
		192,650	v.
		88	w.
		5,000	x.
		102,250	y.
Bal.	540,062		
z.	1,565	2,465	z.
Bal.	539,162		

Petty Cash

i.	150		
Bal.	150		

Accounts Receivable

j.	215,000	215,000	m.
t.	985,000	715,000	u.
Bal.	270,000		

Allowance for Bad Debts

		13,500	Adj. b.
		13,500	Bal.

Merchandise Inventory

h.	425,000	86,000	j.
n.	650,000	65,000	k.
		35,000	l.
		175,000	p.
		130,000	r.
		395,000	t.
Bal.	189,000		

Comprehensive Problem, cont.
Requirements 2, 3, and 7, cont.

Office Supplies

f.	600		
w.	85		
Bal.	685		
		475	Adj. c.
Bal.	210		

Prepaid Insurance

g.	3,600		
		1,800	Adj. a.
Bal.	1,800		

Interest Receivable

Adj. d.	3,533		
Bal.	3,533		

Notes Receivable

k.	150,000	150,000	q
r.	265,000		
Bal.	265,000		

Land

c.	100,000		
Bal.	100,000		

Building

c.	500,000		
Bal.	500,000		

Accumulated Depreciation—Building

		15,000	Adj. e.
		15,000	Bal.

Store Fixtures

d.	75,000		
Bal.	75,000		

Accumulated Depreciation—Store Fixtures

		5,000	Adj. e.
		5,000	Bal.

Comprehensive Problem, cont.
Requirements 2, 3, and 7, cont.

Office Equipment

e.	45,000		
Bal.	45,000		

Accumulated Depreciation—Office Equip.

		18,000	Adj. e.
		18,000	Bal.

Franchise

b.	50,000		
		5,000	Adj. f.
Bal.	45,000		

Accounts Payable

o.	300,000	425,000	h.
s.	500,000	650,000	n.
		275,000	Bal.

Interest Payable

		20,000	Adj. g.
		20,000	Bal.

Notes Payable

		400,000	c.
		400,000	Bal.

Common Stock

		500,000	a.
		500,000	Bal.

Retained Earnings

Dividends

x.	5,000		
Bal.	5,000		

Comprehensive Problem, cont.
Requirements 2, 3, and 7, cont.

Sales Revenue

		215,000	j.
		150,000	k.
		80,000	l.
		350,000	p.
		265,000	r.
		985,000	t.
		2,045,000	Bal.

Interest Revenue

		6,000	q.
		1,565	z.
		7,565	Bal.
		3,533	Adj. d.
		11,098	Bal.

Cost of Goods Sold

j.	86,000		
k.	65,000		
l.	35,000		
p.	175,000		
r.	130,000		
t.	395,000		
Bal.	886,000		

Franchise Fee Expense

y.	102,250		
Bal.	102,250		

Salaries Expense

v.	180,000		
Bal.	180,000		

Utilities Expense

v.	12,650		
Bal.	12,650		

Insurance Expense

Adj. a.	1,800		
Bal.	1,800		

Comprehensive Problem, cont.
Requirements 2, 3, and 7, cont.

Supplies Expense		
Adj. c.	475	
Bal.	475	

Bad Debts Expense		
Adj. b.	13,500	
Bal.	13,500	

Bank Expense		
z.	2,465	
Bal.	2,465	

Credit Card Expense		
l.	1,600	
Bal.	1,600	

Depreciation Expense—Building		
Adj. e.	15,000	
Bal.	15,000	

Depreciation Expense—Store Fixtures		
Adj. e.	5,000	
Bal.	5,000	

Depreciation Expense—Office Equipment		
Adj. e.	18,000	
Bal.	18,000	

Amortization Expense—Franchise		
Adj. f.	5,000	
Bal.	5,000	

Interest Expense		
Adj. g.	20,000	
Bal.	20,000	

Cash Over and Short		
w.	3	
Bal.	3	

Comprehensive Problem, cont.
Requirement 3

TOP QUALITY APPLIANCE—LONG BEACH Bank Reconciliation December 31, 2018					
BANK			BOOK		
Balance, Dec. 31, 2018		$ 490,500	Balance, Dec. 31, 2018		$ 540,062
ADD:			ADD:		
Deposit in Transit		156,000	Interest revenue	$ 1,565	1,565
		646,500			541,627
LESS:			LESS:		
Outstanding checks:	$ 88		EFT payment to Bank Checks	125	
	5,000		Service charge	2,340	2,465
	102,250	107,338			
Adjusted bank balance, December 31, 2018		$ 539,162	Adjusted book balance, December 31, 2018		$ 539,162

Date	Accounts	Debit	Credit
z.	Cash	1,565	
	Interest Revenue		1,565
	Bank Expense ($125 + $2,340)	2,465	
	Cash		2,465

Comprehensive Problem, cont.
Requirement 4

BUILDING
Depreciable cost = Cost − Residual value = $500,000 − $50,000 = $450,000

Straight-Line Depreciation Schedule—BUILDING						
		Depreciation for the Year				
Date	Asset Cost	Depreciable Cost	Depreciation Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/01/18	$500,000					$ 500,000
12/31/18		$ 450,000	1 / 30	$ 15,000	$ 15,000	485,000
12/31/19		450,000	1 / 30	15,000	30,000	470,000
12/31/20		450,000	1 / 30	15,000	45,000	455,000
12/31/21		450,000	1 / 30	15,000	60,000	440,000
12/31/22		450,000	1 / 30	15,000	75,000	425,000

STORE FIXTURES
Depreciable cost = Cost − Residual value = $75,000 − $0 = $75,000

Straight-Line Depreciation Schedule—STORE FIXTURES						
		Depreciation for the Year				
Date	Asset Cost	Depreciable Cost	Depreciation Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/01/18	$75,000					$ 75,000
12/31/18		$ 75,000	1 / 15	$ 5,000	$ 5,000	70,000
12/31/19		75,000	1 / 15	5,000	10,000	65,000
12/31/20		75,000	1 / 15	5,000	15,000	60,000
12/31/21		75,000	1 / 15	5,000	20,000	55,000
12/31/22		75,000	1 / 15	5,000	25,000	50,000

Comprehensive Problem, cont.
Requirement 4, cont.

OFFICE EQUIPMENT

Double-Declining-Balance Depreciation Schedule—OFFICE EQUIPMENT						
		Depreciation for the Year				
Date	Asset Cost	Book Value	DDB Rate	Depreciation Expense	Accumulated Depreciation	Book Value
1/01/18	$ 45,000					$ 45,000
12/31/18		$ 45,000	2 × (1 / 5)	$ 18,000	$ 18,000	27,000
12/31/19		27,000	2 × (1 / 5)	10,800	28,800	16,200
12/31/20		16,200	2 × (1 / 5)	6,480	35,280	9,720
12/31/21		9,720	2 × (1 / 5)	3,888	39,168	5,832
12/31/22		5,832		832*	40,000	5,000

*5th year depreciation is the "plug figure" needed to reduce book value to residual value ($5,832 − $5,000)

Comprehensive Problem, cont.
Requirement 5,

Date	Accounts	Debit	Credit
	Adjusting Entries		
a.	Insurance Expense[1]	1,800	
	Prepaid Insurance		1,800
b.	Bad Debts Expense[2]	13,500	
	Allowance for Bad Debts		13,500
c.	Supplies Expense	475	
	Office Supplies		475
d.	Interest Receivable	3,533	
	Interest Revenue ($265,000 × 0.08 × 2/12)		3,533
e.	Depreciation Expense—Building	15,000	
	Accumulated Depreciation—Building		15,000
	Depreciation Expense—Store Fixtures	5,000	
	Accumulated Depreciation—Store Fixtures		5,000
	Depreciation Expense—Office Equipment	18,000	
	Accumulated Depreciation—Office Equip.		18,000
f.	Amortization Expense—Franchise ($50,000 / 10 years)	5,000	
	Franchise		5,000
g.	Interest Expense ($400,000 × 0.05 × 12/12)	20,000	
	Interest Payable		20,000

(1) $3,600 × 1/2 (2-year policy, 1 year expired)
(2) Target balance = Accounts receivable balance × percentage
= $270,000 × 0.05 = $13,500
Adjustment = Allowance for Bad Debts balance + Target balance
= $0 + $13,500 = $13,500

Comprehensive Problem, cont.
Requirement 6

TOP QUALITY APPLIANCE—LONG BEACH Adjusted Trial Balance December 31, 2018		
	Balance	
Account	**Debit**	**Credit**
Cash	$ 539,162	
Petty Cash	150	
Accounts Receivable	270,000	
Allowance for Bad Debts		$ 13,500
Merchandise Inventory	189,000	
Office Supplies	210	
Prepaid Insurance	1,800	
Interest Receivable	3,533	
Notes Receivable	265,000	
Land	100,000	
Building	500,000	
Accumulated Depreciation—Building		15,000
Store Fixtures	75,000	
Accumulated Depreciation—Store Fixtures		5,000
Office Equipment	45,000	
Accumulated Depreciation—Office Equip.		18,000
Franchise	45,000	
Accounts Payable		275,000
Interest Payable		20,000
Notes Payable		400,000
Common Stock		500,000
Retained Earnings		0
Dividends	5,000	
Sales Revenue		2,045,000
Interest Revenue		11,098
Cost of Goods Sold	886,000	
Franchise Fee Expense	102,250	
Salaries Expense	180,000	
Utilities Expense	12,650	
Insurance Expense	1,800	
Supplies Expense	475	
Bad Debts Expense	13,500	
Bank Expense	2,465	
Credit Card Expense	1,600	
Depreciation Expense—Building	15,000	
Depreciation Expense—Store Fixtures	5,000	
Depreciation Expense—Office Equip	18,000	
Amortization Expense—Franchise	5,000	
Interest Expense	20,000	
Cash Short and Over	3	
Total	$ 3,302,598	$ 3,302,598

Comprehensive Problem, cont.
Requirement 7

TOP QUALITY APPLIANCE—LONG BEACH Income Statement For Year Ended December 31, 2018		
Net Sales Revenue		$ 2,045,000
Cost of Goods Sold		886,000
Gross Profit		1,159,000
Operating Expenses:		
Franchise Expense	$ 102,250	
Salaries Expense	180,000	
Utilities Expense	12,650	
Insurance Expense	1,800	
Supplies Expense	475	
Bad Debt Expense	13,500	
Bank Expense	2,465	
Credit Card Expense	1,600	
Depreciation Expense—Building	15,000	
Depreciation Expense—Store Fixtures	5,000	
Depreciation Expense—Office Equip.	18,000	
Amortization Expense—Franchise	5,000	
Cash Short and Over	3	
Total Operating Expenses		357,743
Operating Income		801,257
Other Income and (Expenses)		
Interest Revenue	11,098	
Interest Expense	(20,000)	
Total Other Income and (Expenses)		(8,902)
Net Income		$ 792,355

TOP QUALITY APPLIANCE—LONG BEACH Statement of Retained Earnings For Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	$ 0
Net income for the year	792,355
	792,355
Dividends	(5,000)
Retained Earnings, December 31, 2018	$ 787,355

Comprehensive Problem, cont.
Requirement 7, cont.

TOP QUALITY APPLIANCE—LONG BEACH
Balance Sheet
December 31, 2018

Assets			
Current Assets:			
Cash		$ 539,162	
Petty Cash		150	
Accounts Receivable	$ 270,000		
Less: Allowance for Bad Debts	(13,500)	256,500	
Merchandise Inventory		189,000	
Office Supplies		210	
Prepaid Insurance		1,800	
Interest Receivable		3,533	
Notes Receivable		265,000	
Total Current Assets			$ 1,255,355
Property, Plant, and Equipment:			
Land		100,000	
Building	500,000		
Less: Accumulated Depreciation	(15,000)	485,000	
Store Fixtures	75,000		
Less: Accumulated Depreciation	(5,000)	70,000	
Office Equipment	45,000		
Less: Accumulated Depreciation	(18,000)	27,000	
Total Property, Plant and Equipment			682,000
Intangible Assets			
Franchise			45,000
Total Assets			$ 1,982,355

Comprehensive Problem, cont.
Requirement 7, cont.

TOP QUALITY APPLIANCE—LONG BEACH Balance Sheet December 31, 2018		
Liabilities		
Current Liabilities:		
Accounts Payable	$ 275,000	
Interest Payable	20,000	
Total Current Liabilities		$ 295,000
Long-Term Liabilities		
Notes Payable		400,000
Total Liabilities		695,000
Stockholders' Equity		
Common Stock	500,000	
Retained Earnings	787,355	
Total Stockholders' Equity		1,287,355
Total Liabilities and Stockholders' Equity		$ 1,982,355

Comprehensive Problem, cont.
Requirement 8

Liquidity Ratios:

Current ratio = Total current assets / Total current liabilities
= $1,255,355 / $295,000
= 4.26

$$\text{Acid-test ratio} = \frac{\text{Cash and cash equivalents + Short-term investments + Net current receivables}}{\text{Current Liabilities}}$$

= ($539,162 + $150 + $256,500 + 3,533 + 265,000) / $295,000
= 3.61

Cash ratio = Cash and cash equivalents / Current liabilities
= ($539,162 + $150) / $295,000
= 1.83

Analysis:
Top Quality Appliance—Long Beach has substantially high liquidity ratios indicating the company has the means to pay its current debts, even if they became due immediately.

Comprehensive Problem, cont.
Requirement 8, cont.

Efficiency Ratios:

Accounts receivable turnover	=	Net credit sales* / Average net accounts receivable
	=	$1,615,000 / [($0 + $256,500) / 2]
	=	$1,615,000 / $128,250
	=	12.59

*Net credit sales = Total sales less cash sales from transactions l and p = $2,045,000 – $80,000 – $350,000 = $1,615,000
Alternatively, transactions j, k, r, and t were credit sales = $215,000 + $150,000 + $265,000 + $985,000 = $1,615,000

Days' sales in receivables	=	365 days / Accounts receivable turnover
	=	365 days / 12.59
	=	29 days

Asset turnover	=	Net sales / Average total assets
	=	$2,045,000 / [($0 + $1,982,355) / 2]
	=	$2,045,000 / $991,177.5
	=	2.06

Rate of return on total assets	=	(Net income + Interest expense) / Average total assets
	=	($792,355 + $20,000) / [($0 + $1,982,355) / 2]
	=	$812,355 / $991,177.5
	=	0.82

Analysis:
Top Quality Appliance—Long Beach is collecting its average receivables more than 12 times per year, or about every 29 days. If we assume the company has credit terms of 30 days, then the collection period is very good.

The asset turnover ratio is 2.06, indicating the company is generating $2.06 in sales for every $1.00 invested in assets. The ratio appears to indicate the company is quite efficient at using its assets to generate sales, but the ratio should also be compared to the industry average and other TQA franchises.

The rate of return on total assets is 0.82 indicating the company is earning $0.82 in net profit for every $1.00 invested in assets. Again, the ratio appears to indicate efficiency but it should be compared to the industry average and other TQA franchises.

Critical Thinking

Tying It All Together Case 9-1

Requirement 1

Plant assets such as property and equipment are reported at cost less accumulated depreciation on the balance sheet. The gross value of plant assets as of December 31, 2015 is $37,692.4 (in millions).

Requirement 2

Yes, McDonald's Corporation depreciates its plant assets using the straight-line method. The useful life for buildings are up to 40 years, leasehold improvements are the lesser of the useful lives of assets or lease terms, and equipment is depreciated three to 12 years. Information about depreciation can be found in the Notes to Consolidated Financial Statements. In addition, accumulated depreciation and amortization are listed on the balance sheet.

Requirement 3

Book value is calculated as the cost of plant assets minus accumulated depreciation. McDonald's Corporation's book value as of December 31, 2015 is $23,117.6 (in millions) or $37,692.4 – $14,574.8.

Requirement 4

McDonald's Corporation would report intangibles on the balance sheet. McDonald's business information (Part 1, Intellectual Property) identified the following intangibles: trademarks (such as "The Golden Arches Logo"), patents, copyrights, and goodwill.

Requirement 5

Goodwill represents the excess of the cost over the market value of net assets of an acquired restaurant. McDonald's Corporation reports $2,516.3 (in millions) of goodwill as of December 31, 2015. McDonald's goodwill primarily results from the purchases of McDonald's restaurants from franchisees (Notes to Consolidated Financial Statements).

Ethical Issue 9-1
Requirement 1

The taxpayer wants to allocate as much of the purchase price as possible to the building because tax law allows a deduction for depreciation of buildings. The greater the allocation to the building, the greater the depreciation deduction and the lower the tax. The cost of the land, on the other hand, is not depreciated, and generates no tax deductible expenses.

Requirement 2

Whether the taxpayer's choice was ethical or unethical is a difficult call. If the taxpayer is deliberately misrepresenting the true costs involved, that would be unethical. If the taxpayer is merely taking an "aggressive position," and is acting "in good faith," then it becomes a legal matter for the IRS or tax courts to decide. If the taxpayer is deliberately taking unfair deductions, then the nation's taxpayers are being shortchanged of their rightful tax revenues by dishonest behavior.

Fraud Case 9-1
Requirement 1

No gain or loss is recognized.

Requirement 2

Residual values are determined by judgment and experience. Although the IRS has standards for tax purposes, businesses are free to set their own values for accounting purposes, as long as they are within a reasonable range.

Requirement 3

An organization could arrange for public auction of surplus vehicles, which would allow the public to bid on the assets, and would yield as high a price as possible in the open market. Furthermore, an organization can employ auditors, either internal or external, who would look into policies related to residual values and surplus sales. Residual values should be set based on industry standards or blue book values. Alternatively, an independent person (not Jim Reed) should be in charge of setting the residual values.

Financial Statement Case 9-1
Requirement 1

Target depreciates property and equipment using the **straight-line method** over estimated useful lives or lease terms if shorter, generally ranging from 2 to 15 years for fixtures and equipment, and 8 to 39 years for buildings and improvements, and 2 to 7 years for computer hardware and software. Leasehold improvements are amortized over the shorter of their estimated useful lives or the related lease life (Note 14)

For income tax purposes, Target generally uses accelerated depreciation methods, probably Modified Accelerated Cost Recovery System (MACRS) (Note 14).

Requirement 2

Depreciation and amortization expenses for the year ended January 30, 2016 were $2,213 million (Consolidated Statements of Earnings).

Requirement 3

Target' statement of cash flows for the year ended January 30, 2016, Investing activities section, reports a cash outflow of $1,438 million for expenditures for property and equipment and $28 million cash inflow from proceeds from disposal of property and equipment.

Requirement 4

As of January 30, 2016, Target reports accumulated depreciation of $16,246 million on property and equipment of $41,463 million, for a net book value of $25,217 million (Consolidated Statements of Financial Position).

Requirement 5

(Amounts in millions)

Asset turnover ratio	=	Net sales / Average total assets
	=	$73,785 / [($40,262 + $41,172) / 2]
	=	$73,785 / $40,717
	=	1.81 times (rounded)

Kohl's Corporation has a ratio of 1.37 for the same time period. Target has a higher ratio which indicates Target is more efficient at using its assets to generate sales.

Communication Activity 9-1

Student answers will vary, but should include the following points:

The **straight-line method** allocates an equal amount of depreciation to each year and is calculated as follows:

Straight-line depreciation = (Cost − Residual value) / Useful life

The **units-of-production method** allocates a varying amount of depreciation (by units) to each year based on an asset's usage. The calculation is a two-step process.

Step 1: Depreciation per unit = (Cost – Residual value) / Useful life in units
Step 2: Units-of-production depreciation = Depreciation per unit × Current year usage

An accelerated depreciation method, such as the double-declining-balance method, expenses more depreciation near the start of an asset's life and less at the end. The **double-declining-balance method** multiplies an asset's decreasing book value by a constant percentage that is twice the straight-line depreciation rate, *2 × (1 / Useful life)*. Double-declining-balance amounts can be computed as follows:

Double-declining-balance depreciation = (Cost – Accumulated depreciation) × 2 × (1 / Useful life)

10 Investments

How Should the Business Invest Its Excess Cash?

Donavon Gill, portfolio manager for GMP Investors, had just finished a meeting with his newest client, Sarah Miller. Sarah is the CEO of Miller Construction, a profitable construction firm with offices throughout the United States. Sarah had requested a meeting with Donavon to discuss an investment plan for the business. Miller Construction was interested in investing its excess cash and, as CEO, Sarah had come to Donavon with a number of questions.

During the meeting, Donavon had shared with Sarah a variety of different investment options that the business could consider. One option might be for Miller Construction to invest in other corporations' stocks (called *equity securities*). Another option for the business might be investing in bonds (called *debt securities*). He also talked to Sarah about why the business might want to invest in each type of security. Donavon knew that it was his responsibility to provide a custom solution for Miller Construction so that Sarah's business would meet its earnings needs.

Sarah was also interested in how Miller Construction would report these investments on its financial statements. She knew that investments in debt and equity securities were reported as assets on the balance sheet, but she was concerned that there might be some additional reporting requirements. Donavon was glad that Sarah was considering these issues and was happy to help her. He shared with her that the type of security (debt or equity) and the length of time the security was held (short-term versus long-term) determined how it was reported on the financial statements. Donavon also suggested that she talk to her company's accountant before deciding on the business's investment plan. He knew that there were a lot of issues to consider when choosing how to invest excess cash.

Why Would a Company Invest?

Many of you are familiar with the famous businessman Warren Buffett, but you might not know that he is the primary stockholder and CEO of **Berkshire Hathaway, Inc**. Berkshire Hathaway is a holding company that owns a large number of other businesses (called *subsidiaries*), including the popular automobile insurer GEICO and the railroad system operator Burlington Northern Santa Fe. In addition to owning subsidiaries, Berkshire Hathaway also invests cash in other corporations' stock, such as The Coca-Cola Company (9.3% ownership), Wal-Mart Stores, Inc. (2.0% ownership), and Phillips 66 (12.6% ownership). Investing excess cash in corporations' stocks and bonds is a common practice; many businesses (and individuals) do this. In this chapter, you learn why companies might invest in securities and how these investments are reported on the financial statements.

Chapter 10 Learning Objectives

1 Identify why companies invest in debt and equity securities and classify investments

2 Account for investments in debt securities

3 Account for investments in equity securities

4 Describe and illustrate how debt and equity securities are reported

5 Use the rate of return on total assets to evaluate business performance

WHY DO COMPANIES INVEST?

Learning Objective 1
Identify why companies invest in debt and equity securities and classify investments

Just as individuals invest in a variety of companies' stocks and bonds, the same is true for businesses. Investments in stocks or bonds can range from a few securities to the acquisition of an entire company. In this chapter, we examine debt (bonds) and equity (stock) accounting for the investor who buys them.

Debt Securities Versus Equity Securities

Investor
The owner of a bond or stock of a corporation.

Investee
The corporation that issued the bond or stock to the investor.

Security
A share or interest representing financial value.

Debt Security
Investment in notes or bonds payable issued by another company.

Equity Security
Investment in stock ownership in another company that sometimes pays cash dividends or issues stock dividends.

The owner of a bond or stock of a corporation is referred to as the **investor**. The corporation that issued the bond or stock is referred to as the **investee**. For example, if you own shares of Smart Touch Learning's stock, you are the investor and Smart Touch Learning is the investee.

Investors can invest in either debt securities or equity securities. A **security** is a share or interest representing financial value. Securities are represented by a certificate (such as a stock certificate) and are commonly traded on an exchange (such as the New York Stock Exchange). A **debt security** is an investment in notes or bonds payable issued by another company. Debt securities represent a credit relationship with another company or governmental entity, and typically pays interest for a fixed period and a final payment of face value at the end of the term. Debt securities include U.S. government securities (Treasury bills), municipal bonds, and corporate bonds. An **equity security** is an investment in stock ownership in another company and sometimes pays cash dividends or issues stock dividends. Equity securities include common and preferred stock.

Reasons to Invest

Why would a company invest in debt or equity securities? Let's look at two common reasons:

1. The company may have short-term, excess cash that it doesn't need for normal operations. This excess cash could be the result of temporary or seasonal business fluctuations, or it could be cash available for a longer term. The company wants to make the best use of its excess cash, so it invests in debt or equity securities to generate investment income. This investment income may come from interest earned from debt investments, dividends earned from stock investments, and/or increases in the market value of the security.
2. The company may invest in debt or equity securities of other companies to pursue a certain business strategy. For example, a company may invest in a key vendor's debt or equity securities to further enhance a business relationship with that vendor. Doing so might strengthen the relationship between the investing company and the vendor.

Of course, there are other reasons a company may want to invest in other companies' debt or equity securities, but the reasons we identified above are the most common. Now, let's turn to a few basics of investing in debt or equity securities.

ETHICS

It's just a tip, isn't it?

Arlene Barry had just left the most recent board meeting of Panda Toy Manufacturing. Arlene served as chairman of the board and was also a majority stockholder in the business. Panda Toy Manufacturing had just learned that the company was being sued by a multinational retail toy store for failure to use flame-retardant filling in its stuffed panda bears. Arlene knew that the business had been cutting costs and had intentionally used filling that was not up to appropriate standards. She was sure that Panda Toy would lose the lawsuit and knew that the value of her stock would drop considerably. Arlene was considering quickly selling her stock before the lawsuit became public knowledge. What should Arlene do? What would you do?

Solution

If Arlene sells her investment in Panda Toy Manufacturing, she could be found guilty of illegal insider trading. Insider trading occurs when a corporate officer, director, or employee buys or sells stock after learning information obtained during the performance of the individual's duties that is considered to be non-public information about a company. If Arlene wants to sell her shares of Panda Toy, she should wait until after the information has become public. This type of sale would be considered legal insider trading and would need to be reported to the U.S. Securities and Exchange Commission (SEC) to notify the public of a change in ownership of the manufacturer's stock.

Classification and Reporting of Investments

Investments are first classified based on the length of time the investor intends to hold the investment. The two classifications are similar to the balance sheet classifications you learned previously.

- **Short-term investments** are investments in debt and equity securities that the investor intends to sell in one year or less. Short-term investments are reported as current assets.
- **Long-term investments** are all investments that are not short-term. Long-term investments include debt and equity securities that the investor expects to hold longer than one year or debt or equity securities that are not readily marketable—for instance, a stock investment in a small or privately held company that is not traded on any stock exchange.

Short-term Investment
An investment in debt and equity securities that the investor intends to sell in one year or less.

Long-term Investment
An investment in debt and equity securities that the investor intends to hold for longer than one year.

Debt Securities

Debt securities can be further classified into three specific types based on how long the investor intends to hold the investment.

- **Trading debt investments**[1] are debt securities in which the investor intends to sell in the very near future—days, weeks, or only a few months—with the intent of generating a profit on a quick sale. Trading debt investments are categorized as current assets.
- **Held-to-maturity (HTM) debt investments** are debt securities the investor intends to hold and has the ability to hold until they mature. Held-to-maturity debt investments are categorized as current assets or long-term assets on the balance sheet, depending on the maturity date.

Trading Debt Investment
A debt security that the investor plans to sell in the very near future.

Held-to-Maturity (HTM) Debt Investment
A debt security the investor intends to hold and has the ability to hold until it matures.

[1] In January 2016, FASB issued new guidance on financial instruments, *Financial Instruments-Overall*. Under this new guidance, the designation of trading investments (equity) and available-for-sale investments (equity) will be eliminated. Trading investments (debt) and available-for-sale investments (debt) will remain. This new guidance goes into effect for fiscal years after December 15, 2017 and early adoption is not permitted. The applicable sections of the text have been updated for this new guidance.

Available-for-Sale (AFS) Debt Investment
A debt security that isn't a trading debt investment or a held-to-maturity debt investment.

- **Available-for-sale (AFS) debt investments** include all debt securities that aren't trading debt investments or held-to-maturity debt investments. Available-for-sale debt investments are reported either as current assets or long-term assets on the balance sheet. AFS debt investments are reported as current assets if the business expects to sell them within one year. All other AFS debt investments that are planned to be held longer than a year are reported as long-term assets.

Equity Securities

Equity securities can also be classified into three specific types based on the investor's level of influence over the investee company.

No Significant Influence Equity Investment
An equity security in which the investor lacks the ability to participate in the decisions of the investee company.

Significant Influence Equity Investment
An equity security in which the investor has the ability to exert influence over operating and financial decisions of the investee company.

Controlling Interest Equity Investment
An equity security in which the investor owns more than 50% of the investee's voting stock.

- **No significant influence.** Investments in which the investor lacks the ability to participate in the decisions of the investee company are treated as **no significant influence equity investments**. Generally, the investor owns less than 20% of the investee's voting stock. These equity investments are reported as either current assets or long-term assets on the balance sheet depending on how long the investor intends to hold the security.
- **Significant influence. Significant influence equity investments** are equity securities in which the investor has the ability to exert influence over operating and financial decisions of the investee company. Generally, the investor owns from 20% to 50% of the investee's voting stock. Significant influence equity investments are reported as long-term assets on the balance sheet.
- **Control. Controlling interest equity investments** are equity securities in which the investor owns more than 50% of the investee's voting stock. Controlling interest investments are consolidated into the investor's financial statements and are discussed in more advanced accounting courses.

Exhibit 10-1 summarizes the different types of investments.

Exhibit 10-1 | Types of Investments

Types of Investments	Definition
Debt securities—*Classified by how long the investor intends to hold the investment*	
Trading debt investment	A debt security that the investor plans to sell in the very near future.
Held-to-maturity (HTM) debt investment	A debt security the investor intends to hold and has the ability to hold until it matures.
Available-for-sale (AFS) debt investment	A debt security that isn't a trading debt investment or a held-to-maturity debt investment.
Equity securities—*Classified by the investor's level of influence over the investee company*	
No significant influence equity investment	An equity security in which the investor lacks the ability to participate in the decisions of the investee company.
Significant influence equity investment	An equity security in which the investor has the ability to exert influence over operating and financial decisions of the investee company.
Controlling interest equity investment	An equity security in which the investor owns more than 50% of the investee's voting stock.

Try It!

Match the key term to the scenario.

1. Available-for-sale debt investments
2. Controlling interest equity investments
3. Trading debt investments
4. Held-to-maturity debt investments
5. Significant influence equity investments
6. No significant influence equity investments

a. Jane owns 53% of Richard's Roses's voting stock.
b. Joe owns a debt security in Bones, Inc. and intends to hold it until maturity.
c. Jeannie owns a debt security in Cricket, Inc. and plans on selling the debt after one year.
d. Jimenez owns 5% of Delgado, Inc.'s voting stock but does not have the ability to participate in the decisions of Delgado, Inc.
e. Jacob owns 24% of Pay, Inc.'s voting stock and has the ability to exert influence over Pay, Inc.
f. Jim owns a debt security in Tag, Inc.'s and plans on holding the debt for only a week.

Check your answers online in MyAccounting Lab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S10-1. MyAccountingLab

HOW ARE INVESTMENTS IN DEBT SECURITIES ACCOUNTED FOR?

Learning Objective 2
Account for investments in debt securities

Let's begin by discussing how debt securities are accounted for, including the purchase, interest revenue earned, and disposition of the securities.

Purchase of Debt Securities

Assume Smart Touch Learning has excess cash to invest and pays $100,000 to buy $100,000 face value, 9%, five-year Neon Company bonds on July 1, 2018. The bonds are issued on July 1, 2018. The bonds pay interest on June 30 and December 31. Smart Touch Learning intends to hold the bonds to maturity and will, therefore, record them as held-to-maturity debt investments. Smart Touch Learning's accounting clerk will record the investment in debt securities at cost, including any brokerage fees paid, with the following entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 1	Held-to-Maturity Debt Investments	100,000	
	Cash		100,000
	Purchased investment in bonds.		

A↑↓ = L + E

HTM Debt Investments↑
Cash↓

Interest Revenue

On December 31, 2018, Smart Touch Learning would receive the first interest payment on the bond investment. Smart Touch Learning's entry to record the receipt of interest on December 31, 2018, is as follows:

A↑	=	L	+	E↑
Cash↑				Interest Revenue↑

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Cash	4,500	
	Interest Revenue ($100,000 × 0.09 × 6/12)		4,500
	Received cash interest.		

Smart Touch Learning would repeat this entry every six months for the five years—each time interest payments are received.

Disposition at Maturity

When Smart Touch Learning disposes of the bonds at maturity (June 30, 2023), it will receive the face value of the bond and record the following entry, assuming the last interest payment has been recorded:

A↑↓	=	L	+	E
Cash↑ HTM Debt Investments↓				

Date	Accounts and Explanation	Debit	Credit
2023			
Jun. 30	Cash	100,000	
	Held-to-Maturity Debt Investments		100,000
	Disposed of bond at maturity.		

In this example, we illustrated the accounting for held-to-maturity debt investments. Debt securities can also be trading debt investments and available-for-sale debt investments. The accounting for these is the same as illustrated above. The only difference is the use of a different account name. In addition, debt securities can be purchased at face value, at a discount, or at a premium. In our example, we purchased the debt securities at face value. If a debt security is purchased at a discount or at a premium, the discount/premium must be amortized when the interest revenue is earned. This amortization can be done using either the straight-line amortization method or the effective-interest amortization method and is similar to recording the amortization of discount or premium on bonds payable covered in a later chapter.

Try It!

7. On January 1, 2018, the College Corporation decides to invest in Small Town bonds. The bonds mature on December 31, 2022, and pay interest of 4% on June 30 and December 31. The market rate of interest was 4% on January 1, 2018, so the $20,000 maturity-value bonds sold for face value. College Corporation intends to hold the bonds until maturity. Journalize the transactions related to College Corporation's investment in Small Town bonds during 2018.

Check your answers online in MyAccounting Lab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S10-2. MyAccountingLab

HOW ARE INVESTMENTS IN EQUITY SECURITIES ACCOUNTED FOR?

Learning Objective 3
Account for investments in equity securities

The accounting for equity securities must be separated into three categories based on the investor's level of influence over the investee company.

Equity Securities with No Significant Influence

Equity securities in which the investor lacks the ability to participate in the decisions of the investee company are initially accounted for at cost.

Purchase of Equity Securities

Assume Smart Touch Learning has excess cash to invest and buys 1,000 shares of stock in Yellow Corporation for $26.16 per share on March 1, 2018. Smart Touch Learning does not have the ability to participate in the decisions of Yellow Corporation. Smart Touch Learning records the purchase as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Mar. 1	Equity Investments ($26.16 per share × 1,000 shares)	26,160	
	Cash		26,160
	Purchased investment in stock.		

A↑↓ = L + E
Equity Investments↑
Cash↓

Dividend Revenue

Yellow Corporation declares and pays a cash dividend of $0.16 per share on June 9, 2018. Smart Touch Learning will receive the cash dividend on June 9 and record the entry as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 9	Cash	160	
	Dividend Revenue ($0.16 per share × 1,000 shares)		160
	Received cash dividend.		

A↑ = L + E↑
Cash↑ | Dividend Revenue↑

Disposition

Assume on July 15, 2018, Smart Touch Learning sells 800 shares of Yellow Stock for $25,000. Smart Touch Learning compares the cash received with the cost of the stock disposed of and determines the amount of gain or loss as follows:

Cash received	$ 25,000
Less: Cost of stock disposed of (800 shares × $26.16)	20,928
Gain or (Loss)	$ 4,072

Smart Touch Learning will then record the following journal entry:

A↑ = L + E↑
Cash↑ Equity Investments↓ = Gain on Disposal↑

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 15	Cash	25,000	
	Equity Investments		20,928
	Gain on Disposal		4,072
	Disposed of investment in stock.		

Remember that Gain on Disposal is a temporary equity account and is reported in the Other Income and (Expenses) section of the income statement. If the company had sold the stock at a loss, the account Loss on Disposal would be recorded as a debit and also reported in the Other Income and (Expenses) section of the income statement.

Equity Securities with Significant Influence (Equity Method)

When a company invests in equity securities with 20% to 50% ownership in the investee's voting stock, the investor can *significantly influence* the investee's decisions. This influence may be helpful if the investee's and investor's businesses are somehow related. These types of investments must be accounted for using the equity method.

Purchase

Investments accounted for by the equity method are recorded at cost at the time of purchase. Suppose Smart Touch Learning pays $400,000 to purchase 40% of the common stock of Kline, Inc. Smart Touch Learning then refers to Kline as an *affiliated company*. Smart Touch Learning's entry to record the purchase of this investment on January 6, 2018 follows. Notice that the investor includes the name of the investee on the account to signify that Smart Touch Learning has significant influence over Kline, Inc.

A↑↓ = L + E
Equity Investments↑ Cash↓

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 6	Equity Investments—Kline, Inc.	400,000	
	Cash		400,000
	Purchased investment in stock (equity method).		

Dividends Received and Share of Net Income

When Smart Touch Learning receives cash dividends from Kline, it records its proportionate part of the cash dividends. Suppose that Kline declares and pays a cash dividend of $50,000 on June 30, 2018. Because Smart Touch Learning owns 40% of the stock, it

receives 40%, or $20,000, of the dividend. Smart Touch Learning receives this dividend and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Cash ($40,000 × 0.40)	20,000	
	Equity Investments—Kline, Inc.		20,000
	Received cash dividend (equity method).		

A↑↓ = L + E
Cash↑
Equity Investments↓

The Equity Investments account is credited for the receipt of a dividend because it decreases the investor's investment. In other words, the dividends are treated as if they were a return of capital rather than as earnings.

Under the equity method, the investor also must record annually its share of the investee's net income. The investor debits the Equity Investments account and credits Revenue from Investments when the investee reports income. As Smart Touch Learning's equity in Kline increases, so does the Equity Investments account on the investor's books.

Suppose Kline reported net income of $125,000 for the 2018 year. Smart Touch Learning would record 40% of this amount as an increase in the investment account, as follows:

In using the equity method, when a dividend is received, why is the Equity Investments account credited instead of Dividend Revenue?

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Equity Investments—Kline, Inc.	50,000	
	Revenue from Investments ($125,000 × 0.40)		50,000
	Recorded revenue earned from investment (equity method).		

A↑ = L + E↑
Equity Investments↑
Revenue from Investments↑

After the preceding entries are posted, Smart Touch Learning's Equity Investments T-account shows its equity in the net assets of Kline as follows:

Equity Investments—Kline, Inc.

Jan. 6	400,000	20,000	Jun. 30
Dec. 31	50,000		
Bal.	430,000		

Smart Touch Learning would report the equity investments on the balance sheet and the revenue from investments on the income statement.

Disposition

When Smart Touch Learning decides to sell its investment in Kline, Inc. it will need to determine whether there is a gain or loss. Suppose Smart Touch Learning sells 10% of the Kline common stock for $40,000 on January 1, 2019. Smart Touch Learning will calculate the gain or loss as follows and record the following journal entry:

Cash received	$ 40,000
Less: Book value on date of disposal ($430,000 × 0.10)	43,000
Gain or (Loss)	$ (3,000)

A↓		L	+	E↓
Cash↑ Equity Investments↓	=			Loss on Disposal↑

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 1	Cash	40,000	
	Loss on Disposal	3,000	
	Equity Investments—Kline, Inc.		43,000
	Disposed of part of investment in stock (equity method).		

Parent Company
A company that owns a controlling interest in another company.

Subsidiary Company
A company that is controlled by another corporation.

Consolidation Accounting
The way to combine the financial statements of two or more companies that have the same owners.

Consolidated Statements
Financial statements that combine the balance sheets, income statements, and statements of cash flow of the parent company with those of its controlling interest affiliates.

Equity Securities with Control (Consolidations)

Many large corporations own controlling interests in other companies. An investor owns a controlling interest when the investor has legal control over the investee company and generally owns more than 50% of the investee's voting stock. This type of investment enables the investor to elect a majority of the board of directors and thereby control the investee. The corporation that controls the other company is called the **parent company**, and the company that is controlled by another corporation is called the **subsidiary company**.

In equity securities with more than 50% ownership, the parent usually prepares consolidated financial statements. **Consolidation accounting** is the way to combine the financial statements of two or more companies that have the same owners. Many published financial reports include consolidated statements. **Consolidated statements** combine the financial statements (such as the balance sheets, income statements, and statements of cash flow) of the parent company with those of its controlling interest affiliates. The final outcome is a single set of statements, as if the parent and its subsidiaries were the same entity. This topic is covered in advanced accounting courses.

Try It!

8. On May 15, 2018, Mayer Co. invests $8,000 in John, Inc. stock. John pays Mayer a $200 dividend on November 15, 2018. Mayer sells the John stock on December 10, 2018, for $7,500. Assume the Mayer Co. does not have significant influence over John, Inc. Journalize the 2018 transactions related to Mayer's investment in John stock.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S10-3 and S10-4. MyAccountingLab

HOW ARE DEBT AND EQUITY SECURITIES REPORTED?

Learning Objective 4
Describe and illustrate how debt and equity securities are reported

Corporations' debt and equity securities are reported on the balance sheet in either the current or the long-term asset section. How they are reported, though, depends upon the type of investment.

Trading Debt Investments

Fair Value
The price that would be used if the investments were sold on the market.

Trading debt investments, those that the investor plans to sell in the very near future, are initially recorded at cost. At the end of each period, though, trading debt securities must be adjusted and reported at fair value. **Fair value** is the price that would be used if the

company were to sell the investments on the market. The company will make a year-end adjustment of the trading debt investment to bring the account to market value. This adjustment is recorded as an unrealized holding gain or loss and is reported in the Other Income and (Expenses) section of the income statement.

It's important to note the distinction between unrealized and realized gains or losses. Unrealized gains or losses occur when a company adjusts an asset to fair value but has not yet disposed of the asset. Realized gains or losses occur when a company disposes of an asset and represents the difference between the cash received at time of disposal and the basis of the asset.

Suppose that on December 31, 2018, Smart Touch Learning reported trading debt investments of $26,160. After careful evaluation, Smart Touch Learning concluded that the market value of the trading debt investments had decreased to $24,000. The company has an unrealized loss of $2,160 on the investments ($24,000 − $26,160). At year-end, Smart Touch Learning would record the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Unrealized Holding Loss—Trading	2,160	
	Fair Value Adjustment —Trading		2,160
	Adjusted trading debt investments to market value.		

A↓	=	L	+	E↓
Fair Value Adjustment↓				Unrealized Holding Loss↑

After the adjustment, the investment T-accounts would appear as follows:

Trading Debt Investments		
Bal.	26,160	

Fair Value Adjustment—Trading		
	2,160	Dec. 31

$26,160 − $2,160 = $24,000

In this case, the Fair Value Adjustment account has a credit balance, and it is considered a contra account and is subtracted from the Trading Debt Investments account to determine carrying value. If the account has a debit balance, it is considered an adjunct account and is added to the Trading Debt Investments account to determine carrying value.

The combined T-accounts show the $24,000 balance for trading debt investments. Smart Touch Learning would report its trading debt investments on the balance sheet at $24,000 at December 31, 2018, and the $2,160 unrealized holding loss on the trading debt investments on the 2018 income statement as follows:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018	
Current Assets:	
Trading Debt Investments (at fair value; cost $26,160)	$ 24,000

SMART TOUCH LEARNING Income Statement (Partial) For the Year Ended December 31, 2018	
Other Income and (Expenses):	
Unrealized Holding Loss—Trading	$ (2,160)

Disposition

When a trading debt security is disposed, the fair value adjustment is ignored in determining the calculation of the gain or loss. The disposition is handled as we have shown earlier in the chapter. The amount of gain or loss is calculated as the difference between the cash received and the cost of the stock disposed. At the end of the year, the company would evaluate their remaining trading debt securities and make a year-end adjustment to current market value.

Available-for-Sale Debt Investments

Available-for-sale (AFS) debt investments are reported as *current assets* on the balance sheet if the business expects to sell them within one year. All other AFS debt investments that are planned to be held longer than a year are reported as *long-term assets* on the balance sheet. The fair value method is also used to account for AFS debt investments.

AFS debt investments are reported on the balance sheet at current market value. This requires a year-end adjustment of the AFS debt investment to current market value, much like the treatment of trading debt investments. However, the unrealized holding gains and losses on AFS debt investments are not reported on the income statement. They are recorded as an adjustment to the Unrealized Holding Gain—Available-for-Sale account or Unrealized Holding Loss—Available-for-Sale account, which is included in Other Comprehensive Income on the Statement of Comprehensive Income and as a component of Accumulated Other Comprehensive Income in the stockholders' equity section of the balance sheet.

Assume on December 31, 2018, Smart Touch Learning reported long-term available-for-sale debt investments of $60,000. After careful review, the company determines the market value of the AFS debt investments has increased to $64,000. Smart Touch Learning has an unrealized holding gain of $4,000 on the investment ($64,000 market value minus

$60,000 purchase price). At year-end, Smart Touch Learning would make the following adjustment:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Fair Value Adjustment—Available-for-Sale	4,000	
	Unrealized Holding Gain—Available-for-Sale		4,000
	Adjusted available-for-sale debt investments to market value.		

A↑	=	L	+	E↑
Fair Value Adjustment↑				Unrealized Holding Gain↑

After posting the December 31, 2018, adjustment, the investment T-accounts would appear as follows:

Available-for-Sale Debt Investments

Bal.	60,000	

Fair Value Adjustment—AFS

Dec. 31	4,000	

$60,000 + $4,000 = $64,000

The combined T-accounts show the $64,000 balance for the AFS debt investments. Smart Touch Learning would report the investment on the balance sheet at $64,000 at December 31, 2018. The $4,000 Unrealized Holding Gain—Available-for-Sale would be reported in the stockholders' equity section of the balance sheet as Accumulated Other Comprehensive Income as shown here:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018	
Assets	
Long-term Assets:	
Available-for-Sale Debt Investments (at fair value; cost $60,000)	$ 64,000
Stockholders' Equity	
Accumulated Other Comprehensive Income:	
Unrealized Holding Gain—AFS	$ 4,000

It's important to remember that unrealized holding gains or losses on available-for-sale debt investments are not included in net income. Instead, they are included as other comprehensive income, which are adjustments to net income to determine comprehensive income. **Comprehensive income** is the company's change in total stockholders' equity from all sources other than owners' investments and dividends. Comprehensive income includes net income plus some specific gains and losses, as follows:

- Unrealized holding gains or losses on *available-for-sale debt investments*
- Foreign currency translation adjustments
- Gains or losses from post-retirement benefit plans
- Deferred gains or losses from derivatives

Comprehensive Income
A company's change in total stockholders' equity from all sources other than owners' investments and dividends.

The calculation of these items is explained in advanced accounting courses. For now, you need to know that these items do not enter into the determination of net income but, instead, are reported as other comprehensive income.

Comprehensive income can be reported one of two ways: as a second income statement or combined with a traditional income statement into a combined statement of comprehensive income. An example of how comprehensive income can be reported is shown in Exhibit 10-2.

Exhibit 10-2 | Comprehensive Income

SMART TOUCH LEARNING Comprehensive Income Statement For the Year Ended December 31, 2018	
Net Income	$ 100,000
Other Comprehensive Income:	
Unrealized Holding Gain—AFS	4,000
Comprehensive Income	$ 104,000

Disposition

It is important to note that disposition of available-for-sale debt investments is handled in the same manner as trading debt investments. Any prior period fair value adjustment is ignored when calculating the amount of the gain or loss. The gain or loss is determined as the difference between the amount received and the cost of the investment. At the end of the year, the company would evaluate their remaining available-for-sale debt investments and make a year-end adjustment to current market value.

Held-to-Maturity Debt Investments

Held-to-maturity (HTM) debt investments are normally reported at amortized cost, which is explained in advanced accounting courses. Depending on the maturity date, the HTM debt investment will be reported as a current asset or a long-term asset on the balance sheet. When the maturity date is within one year of the balance sheet date, the HTM debt investment is reported as a current asset; otherwise, the asset is reported as long-term. Interest revenue earned on HTM debt investments is reported on the income statement in the Other Income and (Expenses) section.

Equity Investments with No Significant Influence

Equity investments with no significant influence must also be adjusted at the end of the year and reported at fair value. Similar to trading debt investments, the company will make a year-end adjustment of the equity investment to bring the account to market value. The adjustment is recorded as an unrealized holding gain or loss and is reported in the Other Income and (Expenses) section of the income statement.

Exhibit 10-3 summarizes the accounting methods for debt and equity securities and also the financial statement effects.

Exhibit 10-3 | **Debt and Equity Securities—Accounting Methods and Financial Statement Effects**

Types of Investments	Accounting Methods	Financial Statement Effects	
		Balance Sheet	Income Statement
Trading Debt Investments	Fair Value: Unrealized Holding Gain or Loss is included in net income.	The investment is reported as a current asset on the balance sheet.	Interest revenue is reported on the income statement.
Held-to-Maturity Debt Investments	Amortized Cost	Depending on the maturity date, the investment is reported as a current or long-term asset on the balance sheet.	Interest revenue is reported on the income statement.
Available-for-Sale Debt Investments	Fair Value: Unrealized Holding Gain or Loss is included in Other Comprehensive Income and reported as a separate component of stockholders' equity.	The investment is reported as a current or long-term asset on the balance sheet depending on management's intent.	Interest revenue is reported on the income statement.
No Significant Influence Equity Investments	Fair Value: Unrealized Holding Gain or Loss is included in net income.	The investment is reported as a current or long-term asset on the balance sheet depending on management's intent.	Dividend revenue is reported on the income statement.
Significant Influence Equity Investments	Equity	The investment is reported as a long-term asset on the balance sheet.	A percentage share of investee's net income is reported on the income statement.
Controlling Interest Equity Investments	Consolidation	The balance sheets of the parent and subsidiary are combined.	The income statements of the parent and subsidiary are combined.

TYING IT ALL TOGETHER

Berkshire Hathaway, Inc. is a holding company owning subsidiaries that engage in a variety of different business activities including insurance, freight rail transportation, utilities and energy, manufacturing, services, and retail. Companies such as GEICO, Burlington Northern Santa Fe, Benjamin Moore, and See's Candies are included in the list of Berkshire Hathaway's subsidiaries. (You can find Berkshire Hathaway, Inc.'s annual report at http://www.berkshirehathaway.com/2015ar/2015ar.pdf)

What type of investments does Berkshire Hathaway report on its balance sheet?

Berkshire Hathaway reports both debt and equity securities on its balance sheet. The company classifies the investments as fixed maturity securities (debt investments), equity securities, and equity securities with significant influence.

How are Berkshire Hathaway's investments classified?

The company, in the notes to the financial statements, reports that held-to-maturity investments are carried at amortized cost and trading securities are acquired with the intent to sell in the near term and are carried at fair value. All other securities are classified as available-for-sale and are carried at fair value. The equity method is used for equity investments in which the company has the ability to exercise significant influence but not control.

Try It!

9. On August 20, 2018, Mraz, Co. decides to invest excess cash of $2,500 by purchasing Virginia, Inc. bonds. At year-end, December 31, 2018, the market price of the bonds was $2,000. The investment is categorized as available-for-sale debt. Journalize the adjusting entry needed at December 31, 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S10-5 and S10-6. MyAccountingLab

HOW DO WE USE THE RATE OF RETURN ON TOTAL ASSETS TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5
Use the rate of return on total assets to evaluate business performance

Rate of Return on Total Assets
A ratio that measures the success a company has in using its assets to earn income. (Net income + Interest expense) / Average total assets.

The **rate of return on total assets**, or simply *return on assets*, measures a company's success in using assets to earn a profit. There are two ways that a company can finance its assets:

- Debt—A company can borrow money from creditors to purchase assets. Creditors earn interest on the money that is loaned.
- Equity—A company may receive cash or other assets from stockholders. Stockholders invest in the company and hope to receive a return on their investment.

Rate of return on total assets is calculated by adding interest expense to net income and dividing by average total assets. Interest expense is added back to net income to determine the real return on the assets regardless of the corporation's financing choices (debt or equity).

Using **Kohl's Corporation's** Fiscal 2015 Annual Report, we can determine its rate of return on total assets. Visit http://www.pearsonhighered.com/Horngren to view a link to Kohl's Corporation's annual report. Net income and interest expense are taken from the company's income statement, and total assets is taken from the balance sheet as follows (in millions):

Total Assets, January 30, 2016	$ 13,606
Total Assets, January 31, 2015	14,333
For Year Ended January 30, 2016:	
Interest Expense	327
Net Income	673

The rate of return on total assets is calculated as:

$$\begin{aligned}\text{Rate of return on total assets} &= (\text{Net income} + \text{Interest expense}) / \text{Average total assets}\\ &= (\$673 + \$327) / [(\$13{,}606 + \$14{,}333) / 2]\\ &= 0.07 = 7\%\end{aligned}$$

Kohl's Corporation has a rate of return on total assets of 7%, which means that for each $1.00 invested in the company's average assets, the company earned $0.07 in profits before considering interest expense. What is a good rate of return on total assets? There is no single answer because rates of return vary widely by industry. Suppose that for the department stores industry, a 12% rate of return on total assets is considered good. In that case, Kohl's Corporation's 7% return on assets would be considered very low compared to the industry average.

Try It!

10. Lee Co. reported the following items on its 2018 financial statements:

Total Assets, December 31, 2018	$ 10,000
Total Assets, December 31, 2017	15,000
For Year Ended December 31, 2018:	
Interest Expense	150
Net Income	850

Determine Lee's rate of return on total assets for 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S10-7. MyAccountingLab

REVIEW

> Things You Should Know

1. Why do companies invest?

- Companies invest in debt or equity securities to generate investment income or to pursue a certain business strategy.
- A debt security is an investment in notes or bonds payable issued by another company.
- An equity security is an investment in stock ownership in another company that sometimes pays cash dividends or issues stock dividends.
- Investments are classified as either short-term or long-term investments.
- Debt securities can be classified into three categories:
  - Trading debt investments—debt securities in which the investor intends to sell in the very near future
  - Held-to-maturity (HTM) debt investments—debt securities the investor intends to hold and has the ability to hold until they mature
  - Available-for-sale (AFS) debt investments—debt securities that aren't trading debt investments or held-to-maturity debt investments
- Equity securities can be classified into three categories:
  - No significant influence equity investments—equity securities in which the investor lacks the ability to participate in the decisions of the investee company
  - Significant influence equity investments—equity securities in which the investor has the ability to exert influence over operating and financial decisions of the investee company. Generally the investor owns 20% to 50% of the investee's voting stock.
  - Controlling interest equity investments—equity securities in which the investor owns more than 50% of the investee's voting stock

2. How are investments in debt securities accounted for?

- Investments in debt securities are recorded at cost, including any brokerage fees paid.
- The receipt of interest revenue is recorded with a debit to Cash and a credit to Interest Revenue.
- Debt securities disposed of at maturity are recorded with a debit to Cash and a credit to the Debt Investments account.

3. How are investments in equity securities accounted for?

- Equity securities with no significant influence
  - The purchase of equity securities is recorded at cost, including any brokerage fees paid.
  - The receipt of dividend revenue is recorded with a debit to Cash and a credit to Dividend Revenue.
  - Equity securities disposed of could involve either a gain or loss on disposal.
- Equity securities with significant influence
  - The purchase of the equity securities is recorded at cost.
  - Dividends declared and received are recorded with a debit to Cash and a credit to Equity Investments. A dividend reduces the investor's investment.
  - The investor's share of net income is recorded as a debit to Equity Investments and a credit to Revenue from Investments. Net income increases the investor's investment.
  - Disposition of equity securities could involve either a gain or loss.
- Equity securities with control are recorded using the consolidation method, which involves the parent company preparing consolidated statements.

4. How are debt and equity securities reported?

- Trading debt investments, available-for-sale debt investments, and equity investments with no significant influence are reported at fair value on the balance sheet.
  - The unrealized holding gain or loss incurred on trading debt investments and equity investments are reported on the income statement as Other Income and (Expenses).
  - The unrealized holding gain or loss incurred on available-for-sale debt investments is not included in net income. It is, instead, reported as part of accumulated other comprehensive income included in stockholders' equity on the balance sheet.
- Held-to-maturity debt investments are reported at amortized cost on the balance sheet.

5. How do we use the rate of return on total assets to evaluate business performance?

- The rate of return on total assets measures a company's success in using its assets to earn a profit.
- (Net income + Interest expense) / Average total assets.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Requirements

1. Identify the appropriate accounting method for each of the following situations (See Learning Objective 1):
   a. Investment in 25% of the investee company's stock of which the investor has significant influence
   b. Available-for-sale debt investment
   c. Investment in more than 50% of the investee company's stock
   d. Bond investment that matures in four years. The investor plans to hold the bond for the full four years.
2. At what amount should the following trading debt investment portfolio be reported on the December 31, 2018, balance sheet? (See Learning Objective 4)

Bond	Investment Cost	Current Market Value
Purple	$ 5,000	$ 5,500
Yellow	61,200	53,000
Black	3,680	6,230
Totals	$ 69,880	$ 64,730

   Journalize any adjusting entry required on December 31.
3. An investor paid $67,900 on January 1, 2018, to acquire 40% of Finn-Girl, Inc.'s outstanding common stock. The investor had significant influence of Finn-Girl, Inc. For the year ending December 31, 2018, Finn-Girl's net income was $80,000, and on June 14, the company declared and paid cash dividends of $55,000 to all stockholders. Journalize the investor's transactions related to the Finn-Girl investment: (a) purchase of the investment, (b) receipt of dividends, (c) investor's share of net income, and (d) sale of Finn-Girl stock for $80,100 on January 3, 2019. (See Learning Objective 3)

> Solutions

Requirement 1

a. Equity b. Fair value c. Consolidation d. Amortized cost

Requirement 2

The trading debt investments should be reported at market value, $64,730, on the balance sheet. The adjusting entry required to report the investments at fair value is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Unrealized Holding Loss—Trading ($64,730 — $69,880)	5,150	
	Fair Value Adjustment—Trading		5,150
	Adjusted trading debt investments to market value.		

The Unrealized Holding Loss—Trading would be reported as an Other Income and (Expenses) item on the income statement.

CHAPTER 10

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
(a) Jan. 1	Equity Investments—Finn-Girl, Inc.	67,900	
	Cash		67,900
	Purchased investment in stock (equity method).		
(b) Jun. 14	Cash	22,000	
	Equity Investments—Finn-Girl, Inc. ($55,000 × 0.40)		22,000
	Received cash dividends (equity method).		
(c) Dec. 31	Equity Investments—Finn-Girl, Inc.	32,000	
	Revenue from Investments ($80,000 × 0.40)		32,000
	Recorded revenue earned from investment (equity method).		
2019			
(d) Jan. 3	Cash	80,100	
	Equity Investments—Finn-Girl, Inc.		77,900
	Gain on Disposal		2,200
	Disposed of investment in stock (equity method).		

Calculations for disposal:

Equity Investments—Finn-Girl, Inc.

Jan. 1	67,900	22,000	Jun. 14
Dec. 31	32,000		
Bal.	77,900		

Cash received	$ 80,100
Less: Book value of stock disposed of	77,900
Gain or (Loss)	$ 2,200

> Key Terms

Available-for-Sale (AFS) Debt Investment (p. 548)

Comprehensive Income (p. 557)

Consolidated Statements (p. 554)

Consolidation Accounting (p. 554)

Controlling Interest Equity Investment (p. 548)

Debt Security (p. 546)

Equity Security (p. 546)

Fair Value (p. 554)

Held-to-Maturity (HTM) Debt Investment (p. 547)

Investee (p. 546)

Investor (p. 546)

Long-term Investment (p. 547)

No Significant Influence Equity Investment (p. 548)

Parent Company (p. 554)

Rate of Return on Total Assets (p. 560)

Security (p. 546)

Short-term Investment (p. 547)

Significant Influence Equity Investment (p. 548)

Subsidiary Company (p. 554)

Trading Debt Investment (p. 547)

> Quick Check

1. Assume Intervale Railway is considering investing in Pale Co. stock for three months. The investment will represent 5% of the voting stock of Pale Co. How would the investment be classified? **Learning Objective 1**

   a. Significant influence equity investment
   b. No significant influence equity investment
   c. Held-to-maturity debt investment
   d. Controlling interest equity investment

2. Which of the following investments is most likely classified as a held-to-maturity debt investment? **Learning Objective 1**

   a. 80% stock ownership in a subsidiary
   b. 100% ownership in voting stock of a supplier
   c. 10-year bonds
   d. None of the above

3. If Intervale Railway invests $100,000 in 5% bonds at face value that the company intends to hold until the bond maturity date, the interest revenue recognized when each semiannual interest payment is received would be recorded as a **Learning Objective 2**

   a. credit to Cash, $2,500.
   b. credit to Interest Revenue, $2,500.
   c. debit to Held-to-Maturity Debt Investments, $2,500.
   d. debit to Dividend Revenue, $2,500.

4. A company invested $45,000 in Yale Co. stock. The investment represented 5% of the voting stock of Yale Co. If the Yale Co. stock investment paid dividends, what account would be credited? **Learning Objective 3**

   a. Equity Investments
   b. Interest Revenue
   c. Dividend Revenue
   d. Cash

5. If a company owns 25% of the voting stock of Pink Co. and can exercise significant influence, dividends received will be **Learning Objective 3**

   a. credited to Equity Investments—Pink Co.
   b. credited to Dividend Revenue.
   c. debited to Equity Investments—Pink Co.
   d. credited to Cash.

6. Best Appliances owns 90% of the voting stock of Wratchet, Inc. Which of the following is true? **Learning Objective 3**

   a. The financial statements of Best would be consolidated into Wratchet.
   b. Wratchet would be considered the parent entity.
   c. Best would be considered the parent entity.
   d. Both a and c are correct.

7. Yale Co. purchased a bond on October 4 of the current year for $45,000 and classified it as available-for-sale. The market value of the investment at year-end is $42,000. What value will be reported in net income for the adjustment, if any? **Learning Objective 4**

   a. $42,000
   b. $0
   c. $(3,000)
   d. Not enough information is given to determine the amount included in net income.

CHAPTER 10

Learning Objective 4

8. Harvard Co. purchased a bond on December 1 of the current year for $30,000 and classified the investment as trading. The market value of the investment at year-end is $36,000. What value will be reported in net income for the adjustment?

   a. $36,000 **b.** $(6,000) **c.** $6,000 **d.** $30,000

Learning Objective 4

9. Bendi Corp. purchased 1,000 shares of Kala Corp. for $16 per share. The investment represents 5% ownership, and Bendi does not have significant influence. The fair value at year-end is $15 per share. Assuming no other transactions occurred, where would the $1 per share difference be reported on the year-end financial statements?

   a. Other Income and (Expense)
   b. Other Comprehensive Income
   c. Operating Income
   d. None of the above

Learning Objective 5

10. Panjab Company reported the following information on its financial statements

Total Assets, December 31, 2018	$ 400,000
Total Assets, December 31, 2019	440,000
For Year Ended December 31, 2019:	
Interest Expense	2,000
Net Income	40,000

What is Panjab's rate of return on total assets?

   a. 10.0%
   b. 9.5%
   c. 10.5%
   d. None of the above

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a debt security?
2. What is an equity security?
3. Why would a company invest in debt or equity securities?
4. Briefly describe the specific types of debt and equity securities.
5. How is the purchase of a held-to-maturity debt security at face value recorded?
6. When disposing of an available-for-sale debt investment, where is the gain or loss on disposal reported in the financial statements?
7. What method is used for investments in equity securities when the investor has significant influence and typically 20% to 50% ownership? Briefly describe how dividends declared and received and share of net income are reported.
8. What method is used for investments in equity securities with more than 50% ownership? Briefly describe this method.
9. What adjustment must be made at the end of the period for trading debt investments and available-for-sale debt investments?
10. Where on the financial statements is an unrealized holding gain or loss on trading debt investments reported?

11. Where on the financial statements is an unrealized holding gain or loss on available-for-sale debt investments reported?
12. What is comprehensive income, and what does it include?
13. How are held-to-maturity debt investments reported on the financial statements?
14. What does the rate of return on total assets measure, and how is it calculated?

> Short Exercises

S10-1 Identifying why companies invest and classifying investments — **Learning Objective 1**

Garden Haven has excess cash of $15,000 at the end of the harvesting season. Garden Haven will need this cash in four months for normal operations.

Requirements

1. What are some reasons why Garden Haven may choose to invest in debt or equity securities?
2. What type of classification would Garden Haven's investment fall within—short-term or long-term? Why?

S10-2 Accounting for debt investments — **Learning Objective 2**

On January 1, 2018, the Chaucer's Restaurant decides to invest in Lake Turner bonds. The bonds mature on December 31, 2023, and pay interest on June 30 and December 31 at 4% annually. The market rate of interest was 4% on January 1, 2018, so the $90,000 maturity value bonds sold for face value. Chaucer's intends to hold the bonds until December 31, 2023.

Requirements

1. Journalize the transactions related to Chaucer's investment in Lake Turner bonds during 2018.
2. In what category would Chaucer's report the investment on the December 31, 2018, balance sheet?

S10-3 Accounting for equity investments — **Learning Objective 3**

On January 1, 2018, Bark Company invests $10,000 in Roots, Inc. stock. Roots pays Bark a $400 dividend on August 1, 2018. Bark sells the Roots's stock on August 31, 2018, for $10,450. Assume the investment is categorized as a short-term equity investment and Bark Company does not have significant influence over Roots, Inc.

Requirements

1. Journalize the transactions for Bark's investment in Roots's stock.
2. What was the net effect of the investment on Bark's net income for the year ended December 31, 2018?

S10-4 Accounting for equity investments — **Learning Objective 3**

On January 1, 2018, Bryant, Inc. decides to invest in 3,750 shares of Farrier stock when the stock is selling for $16 per share. On August 1, 2018, Farrier paid a $0.70 per share cash dividend to stockholders. On December 31, 2018, Farrier reports net income of $50,000 for 2018. Assume Farrier has 15,000 shares of voting stock outstanding during 2018 and Bryant has significant influence over Farrier.

CHAPTER 10

Requirements

1. Identify what type of investment the Farrier stock is for Bryant.
2. Journalize the transactions related to Bryant's investment in the Farrier stock during 2018.
3. In what category and at what value would Bryant's report the investment on the December 31, 2018, balance sheet?

Learning Objectives 3, 4

S10-5 Accounting for debt investments

On February 1, 2018, Bell Co. decides to invest excess cash of $16,800 by purchasing a Grant, Inc. bond at face value. At year-end, December 31, 2018, the fair value of the Grant bond was $19,600. The investment is categorized as a trading debt investment.

Requirements

1. Journalize the transactions for Bell's investment in Grant, Inc. for 2018.
2. In what category and at what value would Bell report the asset on the December 31, 2018, balance sheet? In what account would the market price change in Grant's bond be reported, if at all?
3. What was the net effect of the investment on Bell's net income for the year ended December 31, 2018?

Learning Objectives 3, 4

S10-6 Accounting for debt investments

On June 1, 2018, Josh's Restaurant decides to invest excess cash of $54,400 from the tourist season by purchasing a Jackrabbit, Inc. bond at face value. At year-end, December 31, 2018, Jackrabbit's bond had a market value of $51,200. The investment is categorized as an available-for-sale debt investment and will be held for the short-term.

Requirements

1. Journalize the transactions for Josh's investment in Jackrabbit, Inc. for 2018.
2. In what category and at what value would Josh report the asset on the December 31, 2018, balance sheet? In what account would the market price change in Jackrabbit's stock be reported, if at all?
3. What was the net effect of the investment on Josh's net income for the year ended December 31, 2018?

Learning Objective 5

S10-7 Computing rate of return on total assets

Barot's 2018 financial statements reported the following items—with 2017 figures given for comparison:

BAROT, INC.
Balance Sheet
As of December 31, 2018 and 2017

	2018	2017
Total Assets	$ 32,978	$ 30,660
Total Liabilities	19,400	11,560
Total Stockholders' Equity (all common)	13,578	19,100
Total Liabilities and Stockholders' Equity	$ 32,978	$ 30,660

Net income for 2018 was $3,910, and interest expense was $240. Compute Barot's rate of return on total assets for 2018. (Round to the nearest percent.)

> Exercises

E10-8 Accounting for debt investments

Learning Objective 2

Griffin purchased a bond on January 1, 2018, for $140,000. The bond has a face value of $140,000 and matures in 20 years. The bond pays interest on June 30 and December 31 at a 3% annual rate. Griffin plans on holding the investment until maturity.

Requirements

1. Journalize the 2018 transactions related to Griffin's bond investment. Explanations are not required.
2. Journalize the transaction related to Griffin's disposition of the bond at maturity on December 31, 2037. (Assume the last interest payment has already been recorded.) Explanations are not required.

E10-9 Accounting for debt investments

Learning Objective 2

Advance & Co. owns vast amounts of corporate bonds. Suppose Advance buys $1,100,000 of FermaCo bonds at face value on January 2, 2018. The FermaCo bonds pay interest at the annual rate of 3% on June 30 and December 31 and mature on December 31, 2037. Advance intends to hold the investment until maturity.

Requirements

1. Journalize any required 2018 entries for the bond investment.
2. How much cash interest will Advance receive each year from FermaCo?
3. How much interest revenue will Advance report during 2018 on this bond investment?

E10-10 Accounting for debt investments

Learning Objective 2

2a. Int. Rev. CR $36,000

League Up & Co. owns vast amounts of corporate bonds. Suppose League Up buys $900,000 of CocoCorp bonds at face value on January 2, 2018. The CocoCorp bonds pay interest at the annual rate of 8% on June 30 and December 31 and mature on December 31, 2022. League Up intends to hold the investment until maturity.

Requirements

1. How would the bond investment be classified on League Up's December 31, 2018, balance sheet?
2. Journalize the following on League Up's books:
   - **a.** Receipt of final interest payment on December 31, 2022.
   - **b.** Disposition of the investment at maturity on December 31, 2022.

E10-11 Accounting for debt investments

Learning Objectives 2, 4

Peyton Investments completed the following investment transactions during 2018:

2018	
Jan. 5	Purchased Vedder Company's $400,000 bond at face value. Peyton classified the investment as available-for-sale. The Vedder bond pays interest at the annual rate of 4% on June 30 and December 31 and matures on December 31, 2021. Management's intent is to keep the bonds for several years.
Jun. 30	Received an interest payment from Vedder.
Dec. 31	Received an interest payment from Vedder.
31	Adjusted the investment to its current market value of $396,000.

Requirements

1. Journalize Peyton's investment transactions. Explanations are not required.
2. Prepare a partial balance sheet for Peyton's Vedder investment as of December 31, 2018.
3. Prepare a comprehensive income statement for Peyton Investments for year ended December 31, 2018. Assume net income was $200,000.

Learning Objectives 3, 4

E10-12 Accounting for equity investments

Strategic Investments completed the following investment transactions during 2018:

Jan. 14	Purchased 800 shares of Phyflexon stock, paying $50 per share. The investment represents 4% ownership in Phyflexon's voting stock. Strategic does not have significant influence over Phyflexon. Strategic intends to hold the investment for the indefinite future.
Aug. 22	Received a cash dividend of $0.24 per share on the Phyflexon stock.
Dec. 31	Adjusted the investment to its current market value of $45 per share.
31	Phyflexon reported net income of $330,000 for the year ended 2018.

Requirements

1. Journalize Strategic's investment transactions. Explanations are not required.
2. Classify and prepare a partial balance sheet for Strategic's Phyflexon investment as of December 31, 2018.
3. Prepare a partial income statement for Strategic Investments for year ended December 31, 2018.

Learning Objectives 3, 4

E10-13 Accounting for equity investments

Captain Investments completed the following investment transactions during 2018:

Jan. 14	Purchased 200 shares of Velcon stock, paying $53 per share. The investment represents 4% ownership in Velcon's voting stock. Captain does not have significant influence over Velcon. Captain intends to hold the investment for the indefinite future.
Aug. 22	Received a cash dividend of $0.28 per share on the Velcon stock.
Dec. 31	Adjusted the Velcon investment to its current market value of $58.

Requirements

1. Journalize the entries for 2018. Explanations are not required.
2. What account(s) and amount(s), if any, would be reported on Captain's income statement for the year ended December 31, 2018?

Learning Objective 3

1. Revenue from Investments CR $45,000

E10-14 Accounting for equity investments

Money Man Investments completed the following transactions during 2018:

Jan. 14	Purchased 400 shares of Technomite stock, paying $56 per share. The investment represents 25% ownership in Technomite's voting stock and Money Man has significant influence over Technomite. Money Man intends to hold the investment for the indefinite future.
Aug. 22	Received a cash dividend of $0.27 per share on the Technomite stock.
Dec. 31	Technomite's current market value is $51 per share.
31	Technomite reported net income of $180,000 for the year ended 2018.

Requirements

1. Journalize Money Man's transactions. Explanations are not required.
2. Classify and prepare partial financial statements for Money Man's 25% Technomite investment for the year ended December 31, 2018.

E10-15 Accounting for equity investments

Learning Objective 3

3. $295,750,000 Bal.

Suppose that on January 6, 2018, East Coast Motors paid $280,000,000 for its 35% investment in Boxcar Motors. East Coast has significant influence over Boxcar after the purchase. Assume Boxcar earned net income of $90,000,000 and paid cash dividends of $45,000,000 to all outstanding stockholders during 2018. (Assume all outstanding stock is voting stock.)

Requirements

1. What method should East Cost Motors use to account for the investment in Boxcar Motors? Give your reasoning.
2. Journalize all required 2018 transactions related to East Cost Motors's Boxcar investment. Include an explanation for each entry.
3. Post all 2018 transactions to the investment T-account. What is its balance after all the transactions are posted? How would this balance be classified on the balance sheet dated December 31, 2018?

E10-16 Classifying and accounting for equity investments

Learning Objectives 1, 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments CR $32,500

Boston Today Publishers completed the following investment transactions during 2018 and 2019:

2018	
Dec. 6	Purchased 2,500 shares of Loveable stock at a price of $24.00 per share, intending to sell the investment next month. Boston did not have significant influence over Loveable.
23	Received a cash dividend of $1.50 per share on the Loveable stock.
31	Adjusted the investment to its market value of $11.00 per share.
2019	
Jan. 27	Sold the Loveable stock for $18.20 per share.

Requirements

1. Journalize Boston Today's investment transactions. Explanations are not required.
2. On December 31, 2018, how would the Loveable stock be classified and at what value would it be reported on the balance sheet?

E10-17 Computing rate of return on total assets

Learning Objective 5

Avg. total assets $368,000,000

Montane Exploration Company reported these figures for 2018 and 2017:

Income Statement—partial:	**2018**	**2017**
Interest Expense	$ 16,700,000	$ 16,500,000
Net Income	16,900,000	20,200,000
Balance Sheet—partial:	**Dec. 31, 2018**	**Dec. 31, 2017**
Total Assets	$ 316,000,000	$ 420,000,000

Compute the rate of return on total assets for 2018. (Round to two decimals.)

> Problems Group A

Learning Objective 2

1. Dec. 31 Int. Rev. CR $15,00

P10-18A Accounting for debt investments

Suppose Solomon Brothers purchases $500,000 of 6% annual bonds of Morin Corporation at face value on January 1, 2018. These bonds pay interest on June 30 and December 31 each year. They mature on December 31, 2022. Solomon intends to hold the Morin bond investment until maturity.

Requirements

1. Journalize Solomon Brothers's transactions related to the bonds for 2018.
2. Journalize the entry required on the Morin bonds maturity date. (Assume the last interest payment has already been recorded.)

CHAPTER 10

Learning Objectives 1, 2, 3, 4

2. Sep. 16 Gain on Disposal CR $5,880

P10-19A Classifying and accounting for debt and equity investments

Jetway Corporation generated excess cash and invested in securities as follows:

2018	
Jul. 2	Purchased 4,200 shares of Pogo, Inc. common stock at $12.00 per share. Jetway plans to sell the stock within three months, when the company will need the cash for normal operations. Jetway does not have significant influence over Pogo.
Aug. 21	Received a cash dividend of $0.80 per share on the Pogo stock investment.
Sep. 16	Sold the Pogo stock for $13.40 per share.
Oct. 1	Purchased a Violet bond for $20,000 at face value. Jetway classifies the investment as trading and short-term.
Dec. 31	Received a $100 interest payment from Violet.
31	Adjusted the Violet bond to its market value of $22,000.

Requirements

1. Classify each of the investments made during 2018. (Assume the equity investments represent less than 20% of ownership of outstanding voting stock.)
2. Journalize the 2018 transactions. Explanations are not required.
3. Prepare T-accounts for the investment assets, and show how to report the investments on Jetway's balance sheet at December 31, 2018.
4. Where is the unrealized holding gain or loss associated with the trading debt investment reported?

Learning Objectives 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments DR $4,000

P10-20A Accounting for equity investments

The beginning balance sheet of Waterfall Source Co. included a $400,000 investment in Evan stock (20% ownership, Waterfall has significant influence over Evan). During the year, Waterfall Source completed the following investment transactions:

Mar. 3	Purchased 4,000 shares at $11 per share of Lili Software common stock as a long-term equity investment, representing 7% ownership, no significant influence.
May 15	Received a cash dividend of $0.61 per share on the Lili investment.
Dec. 15	Received a cash dividend of $70,000 from Evan investment.
31	Received Evan's annual report showing $300,000 of net income.
31	Received Lili's annual report showing $120,000 of net income for the year.
31	Evan's stock fair value at year-end was $390,000.
31	Lili's common stock fair value at year-end was $12 per share.

Requirements

1. Journalize the transactions for the year of Waterfall Source.
2. Post transactions to T-accounts to determine the December 31, 2018, balances related to the investment and investment income accounts.
3. Prepare Waterfall Source's partial balance sheet at December 31, 2018, from your answers in Requirement 2.
4. Where is the unrealized holding gain or loss associated with the Lili stock reported?

> Problems Group B

P10-21B Accounting for debt investments

Learning Objective 2

1. Dec. 31 Int. Rev. CR $14,000

Suppose Hale and Sons purchases $800,000 of 3.5% annual bonds of Tyson Way Corporation at face value on January 1, 2018. These bonds pay interest on June 30 and December 31 each year. They mature on December 31, 2022. Hale and Sons intends to hold the Tyson Way bond investment until maturity.

Requirements

1. Journalize Hale and Sons's transactions related to the bonds for 2018.
2. Journalize the entry required on the Tyson Way bonds maturity date. (Assume the last interest payment has already been recorded.)

P10-22B Classifying and accounting for debt and equity investments

Learning Objectives 1, 2, 3, 4

2. Sep. 16 Gain on Disposal CR $2,940

Captain Transfer Corporation generated excess cash and invested in securities as follows:

2018	
Jul. 2	Purchased 4,200 shares of Naradon, Inc. common stock at $13.00 per share. Captain Transfer plans to sell the stock within three months, when the company will need the cash for normal operations. Captain Transfer does not have significant influence over Naradon.
Aug. 21	Received a cash dividend of $0.40 per share on the Nardon stock investment.
Sep. 16	Sold the Naradon stock for $13.70 per share.
Oct. 1	Purchased a Purple bond for $40,000 at face value. Captain Transfer classifies the investment as trading and short-term.
Dec. 31	Received a $600 interest payment from Purple.
31	Adjusted the Purple bond to its market value of $44,000.

Requirements

1. Classify each of the investments made during 2018. (Assume the equity investments represent less than 20% of ownership of outstanding voting stock.)
2. Journalize the 2018 transactions. Explanations are not required.
3. Prepare T-accounts for the investment assets, and show how to report the investments on Captain Transfer's balance sheet at December 31, 2018.
4. Where is the unrealized holding gain or loss associated with the trading debt investment reported?

CHAPTER 10

Learning Objectives 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments DR $5,000

P10-23B Accounting for equity investments

The beginning balance sheet of Text Source Co. included a $700,000 investment in Taylor stock (20% ownership).

During the year, Text Source completed the following investment transactions:

Mar. 3	Purchased 5,000 shares at $13 per share of Josh Software common stock as a long-term equity investment, representing 3% ownership, no significant influence.
May 15	Received a cash dividend of $0.69 per share on the Josh investment.
Dec. 15	Received a cash dividend of $100,000 from Taylor investment.
31	Received Taylor's annual report showing $100,000 of net income.
31	Received Josh's annual report showing $620,000 of net income for the year.
31	Taylor's stock fair value at year-end was $620,000.
31	Josh's common stock fair value at year-end was $14 per share.

Requirements

1. Journalize the transactions for the year of Text Source.
2. Post transactions to T-accounts to determine the December 31, 2018, balances related to the investment and investment income accounts.
3. Prepare Text Source's partial balance sheet at December 31, 2018, from your answers in Requirement 2.
4. Where is the unrealized holding gain or loss associated with the Josh stock reported?

CRITICAL THINKING

> Using Excel

P10-24 Using Excel to prepare balance sheet presentation of equity and debt securities

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

The financial statement presentation of debt securities categorized as trading, held-to-maturity, or available-for-sale as of March 31, 2018, is due shortly to Catherine's supervisor. She has received lists of the securities and balance sheet amounts from the IT department. However, one list of securities links together the security ID, the security name, the security category, and whether it is short-term or long-term. A second list contains the security ID and balance sheet amount(s). Catherine will have to manipulate the data to obtain the information she needs.

Requirements

1. Split the contents of the two lists into separate cells. Use functions LEFT, MID, RIGHT, FIND and VALUE as needed.
2. Add a column to List 2 that calculates the lower of cost or fair value by security using the function MIN.
3. Create a new list of securities that has Description, Category, Short-term or Long-term, and Lower of Cost or Fair Value. This new list should contain values (not formulas).
4. Copy the new list to a new location. Sort securities as to whether they are short-term or long-term (in reverse alphabetical order), and then sort by category (in reverse alphabetical order).
5. Subtotal the securities first by time (short-term or long-term), and then by category (trading, held-to-maturity, or available-for-sale). On the second subtotal, do not remove the previous subtotals.
6. Compress the information so that only the subtotals appear (display level 3).

> Continuing Problem

P10-25 Accounting for debt and equity investments

This problem continues the Canyon Canoe Company situation from Chapter 9. Amber and Zack Wilson are pleased with the growth of their business and have decided to invest its temporary excess cash in a brokerage account. The company had the following securities transactions in 2019.

Jul. 1	Purchased 8,000 shares in Adobe Outdoor Adventure Company for $3 per share. Canyon Canoe does not have significant influence over Adobe.
7	Purchased 35% of the stock of Bison Backpacks consisting of 43,750 shares of stock (out of a total of 125,000 shares) for $5 per share. Canyon Canoe does have significant influence over Bison.
10	Purchased a bond from Camelot Canoes with a face value of $80,000. Canyon Canoe intends to hold the bond to maturity. The bond pays interest semiannually on June 30 and December 31.
Sep. 30	Received dividends of $0.15 per share from Adobe.
Nov. 1	Received dividends of $0.30 per share from Bison.
Dec. 31	Received an interest payment of $3,200 from Camelot Canoes.
31	Bison Backpacks reported net income of $30,000 for the year.
31	Adjusted the Adobe stock for a market value of $2.98 per share.

Requirements

1. Journalize the transactions including any entries, if required, at December 31, 2019.
2. Determine the effect on Canyon Canoe Company's net income for the year for each of the three investments.

> Tying It All Together Case 10-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Berkshire Hathaway, Inc.'s 2015 annual report (http://www.berkshirehathaway.com/2015ar/2015ar.pdf).

Berkshire Hathaway, Inc. is a holding company owning subsidiaries that engage in a variety of different business activities including insurance, freight rail transportation, utilities and energy, manufacturing, services and retail.

Requirements

With a partner or group, lead your class in a discussion of the following questions or write a report as directed by your instructor.

1. Review Note 3 (Investments in fixed maturity securities). At December 31, 2015, what type of investments in securities with fixed maturities did the company hold?
2. Review Note 4 (Investments in equity securities). At December 31, 2015, what type of investments in equity securities did the company hold?
3. Review Note 1(d) (Investments). How, if at all, does the company use fair value measurements in regards to its investments?

CHAPTER 10

> Decision Case 10-1

Rock Designs, Inc. is a jewelry store located in Miramar Beach, Florida. After Valentine's Day, the store often has excess cash to get it through the three-month slow season. The primary stockholder, Hardy Rock, wants to make this seasonal cash work for the business.

Requirements

1. Identify which investment class options are available to Rock Designs, Inc.
2. The company identifies that it wants to invest in the technology sector and has narrowed its choices to three companies: Apple, Inc., Google, Inc., and Microsoft Corporation. Prepare a brief analysis comparing the three companies, and recommend one of the three based on your analysis.

> Ethical Issue 10-1

As a result of the recent mortgage crisis, many banks reported record losses to their mortgage receivables and other assets based on the decline in these assets' fair values.

Requirements

1. What would the effect be to stakeholders if such losses were not reported in a timely way?
2. If a business chooses not to report these losses, is there an ethical issue involved? Who is hurt?

> Fraud Case 10-1

Wild Adventure conducts tours of wildlife reserves around the world. The company recently purchased a lodge in Adelaide, Australia, securing a 4% mortgage from First Bank. In addition to monthly payments, Wild Adventure must provide annual reports to the bank showing that the company has a current ratio of 1.2 or better.

After reviewing the annual reports, the CEO, N. O. Scrooge, approached Carl Hauptfleisch, the CFO, and stated, "We've decided we are going to move all our long-term debt investments into our brokerage account so we can sell them soon. Carl, go ahead and make the adjusting entries as of the current year-end."

Carl made the adjustments even though he doesn't think the company will actually go ahead with the planned sale of the long-term debt investments. The subsequent year, the economy turned, and the company's travel revenues dropped more than 60%. Wild Adventure eventually defaulted on the First Bank loan.

Requirements

1. What effect did the adjustments have on the financial statements? What effect did the adjustments have on the current ratio?
2. What type of information in the financial reports would have helped the bank detect this reclassification?
3. Has a fraud occurred? If so, what is the fraud?

> Financial Statement Case 10-1

Details about a company's investments appear in a number of places in the annual report. Use **Target Corporation's** Fiscal 2015 annual report to answer the following questions. Visit **http://www.pearsonhighered.com/Horngren** to view a link to Target Corporation's Fiscal 2015 annual report.

Requirements

1. Calculate the rate of return on total assets for Target Corporation for the year ended January 30, 2016.
2. Compare Target Corporation's rate of return on total assets to **Kohl's Corporation's** ratio. Discuss the differences.

> Communication Activity 10-1

In 150 words or fewer, explain the difference between trading debt investments and available-for-sale debt investments.

> Quick Check Answers

1. b **2.** c **3.** b **4.** c **5.** a **6.** c **7.** b **8.** c **9.** a **10.** a

Chapter 10
Investments

Review Questions

1. A debt security is an investment in notes or bonds payable issued by another company. Debt securities represents a credit relationship with another company or governmental entity that typically pays interest for a fixed period and a final payment of face value at the end of the term.

2. An equity security represents stock ownership in another company that sometimes pays cash or stock dividends.

3. Two common reasons why a company would invest in debt or equity securities are as follows:

- The company may have short-term, excess cash that it doesn't need for normal operations. This excess cash could be the result of temporary or seasonal business fluctuations, or it could be cash available for a longer term. The company wants to make the best use of its excess cash, so it invests in debt or equity securities to generate investment income. This investment income may come from interest earned from debt investments, dividends earned from stock investments, and/or increases in the market value of the security.
- The company may invest in debt or equity securities of other companies to pursue a certain business strategy. For example, a company may invest in a key vendor's debt or equity securities to further enhance a business relationship with that vendor. Doing so might strengthen the investing company's supply chain source.

4. The specific types of debt securities are as follows:

- Trading debt investments are debt securities that the investor plans to sell in the very near future—days, weeks, or only a few months—with the intent of generating a profit on a quick sale. Trading debt investments are categorized as current assets on the balance sheet.
- Held-to-maturity debt investments are debt securities that the investor intends to hold and has the ability to hold until they mature. Depending on the maturity date, held-to-maturity debt investments are categorized as current assets or long-term assets on the balance sheet.
- Available-for-sale debt investments are debt securities that aren't trading or held-to-maturity investments. The investor does not plan to hold the security until maturity. Available-for-sale debt investments are reported as current assets on the balance sheet if the business expects to sell them within one year. All other available-for-sale debt investments that are expected to be held longer than a year are reported as long-term assets on the balance sheet.

4., cont. The specific types of equity securities are as follows:

- No significant influence equity investments are equity securities in which the investor lacks the ability to participate in the decisions of the investee company. No significant interest investments are reported either as current assets or long-term assets on the balance sheet.
- Significant interest equity investments are equity securities in which the investor has the ability to exert influence over operating and financial decisions of the investee company. Typically, the investor owns 20% to 50% of the investee's outstanding voting stock. Significant interest investments are reported as long-term assets on the balance sheet.
- Controlling interest equity investments are equity securities that represent more than 50% of the investee's outstanding voting stock. Controlling interest investments are consolidated into the investor's financial statements.

5. The purchase of a held-to-maturity debt security is recorded at cost, including any brokerage fees paid. The account Held-to-Maturity Debt Investments is debited and cash is credited for the amount paid.

6. A gain or loss on disposal of an available-for-sale debt investment is classified as Other Income and (Expenses) on the income statement.

7. The equity method is used by the investing company to account for equity securities that represent 20% to 50% ownership of the investee's outstanding voting stock. The investor records its proportionate share of dividends declared and received by the investee as a decrease (credit) to the Equity Investments account. The investor records its proportionate share of the investee's net income as an increase (debit) to the Equity Investments account and an increase (credit) to the Revenue from Investments account.

8. Consolidation accounting is used by the investing company to account for equity securities that represent more than 50% ownership of the investee's outstanding voting stock. Consolidation accounting is the way to combine the financial statements of two or more companies that have the same owners. Consolidated financial statements combine the balance sheets, income statements, and cash flow statements of the parent company (the investor) with those of its controlling interest affiliates (the investees). The final outcome is a single set of financial statements, as if the parent and its subsidiaries were the same entity.

9. An adjustment must be made at the end of the accounting period for trading debt investments and available-for-sale debt investments to bring the investment accounts to market (fair) value.

10. An unrealized holding gain or loss on trading debt investments is classified as other income and (expenses) on the income statement.

11. Unrealized holding gains or losses on available-for-sale debt investments are not included in net income. Instead, they are included in other comprehensive income, which is added to (gains), or subtracted from (losses) net income to determine comprehensive income. In addition, unrealized holding gains or losses on available-for-sale debt investments are reported as a component of Accumulated Other Comprehensive Income that is reported in the stockholders' equity section of the balance sheet.

12. Comprehensive income is a company's change in total stockholders' equity from all sources other than investments made by owners into the company and dividends distributed to owners by the company. Comprehensive income includes net income plus other comprehensive income. Examples of items classified as other comprehensive income include the following:

- Unrealized holding gains or losses on available-for-sale debt investments
- Foreign-currency translation adjustments
- Gains or losses from post-retirement benefit plans
- Deferred gains or losses from derivatives

13. Depending on the maturity date, held-to-maturity debt investments are categorized as current assets or long-term assets on the balance sheet and reported at amortized cost.

14. The rate of return on total assets measures the success a company has in using its assets to earn income.

$$\text{Rate of return on total assets} = (\text{Net income} + \text{Interest expense}) \;/\; \text{Average total assets}^{(a)}$$

(a)

$$\text{Average total assets} = (\text{Beginning total assets} + \text{Ending total assets}) \;/\; 2$$

Short Exercises

S10-1
Requirement 1

Companies should make the best use of excess cash. Because, as a result of temporary or seasonal business fluctuations, Garden Haven has short-term excess cash that isn't needed for normal operations in the next four months, the company should consider investing in debt or equity securities to generate investment income. This investment income may come from interest earned from debt investments, dividends earned from stock investments, and/or increases in the market value of the securities.

Requirement 2

Garden Haven's investment would be classified as either a trading debt investment or an equity investment and would be reported as a current (short-term) asset on the balance sheet. Garden Haven needs the cash from its investment within four months. Trading debt investments are debt securities that the investor plans to sell in the very near future. In the case of an equity security, the investor owns less than 20% of the investee's outstanding voting stock and has no significant influence over the investee.

S10-2
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Held-to-Maturity Debt Investments	90,000	
	Cash		90,000
	Purchased investment in bonds.		
Jun. 30	Cash	1,800[(a)]	
	Interest Revenue		1,800[(a)]
	Received cash interest.		
Dec. 31	Cash	1,800[(a)]	
	Interest Revenue		1,800[(a)]
	Received cash interest.		

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	$90,000	×	4%	×	½
	=	$1,800				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bond was purchased at face (par) value, rather than at a discount or premium.

Requirement 2

Chaucer's would report the investment as a held-to-maturity debt investment classified as a long-term asset on the December 31, 2018 balance sheet.

S10-3
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Equity Investments	10,000	
	Cash		10,000
	Purchased investment in stock.		
Aug. 1	Cash	400	
	Dividend Revenue		400
	Received cash dividend.		
Aug. 31	Cash	10,450	
	Equity Investments		10,000
	Gain on Disposal		450[a]
	Disposed of investment in stock.		

Calculations:

[a]

Gain on disposal	=	Total cash received	−	Total cost
	=	$10,450	−	$10,000[b]
	=	$450		

[b] Purchase cost on Jan. 1.

Requirement 2

The net effect of the investment on Bark's net income for the year ended December 31, 2018, was a $850 net increase.

Calculations:

Net increase in net income	=	Dividend revenue	+	Gain on disposal
	=	$400	+	$450[a]
	=	$850		

[a] Calculated in Requirement 1.

S10-4
Requirement 1

Bryant's investment in the Farrier stock is a significant interest investment (equity method) because the investment is in equity securities, Bryant owns 25% of Farrier's outstanding voting stock (which meets the criterion for this classification: 20% to 50% of the investee's outstanding voting stock), and Bryant is able to exert significant influence over Farrier.

Calculations:

Percentage ownership	=	Total number of shares owned	/	Total number of shares of the investee's outstanding voting stock
	=	3,750 shares	/	15,000 shares
	=	25%		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Equity Investments—Farrier	60,000[(a)]	
	Cash		60,000[(a)]
	Purchased investment in stock (equity method).		
Aug. 1	Cash	2,625[(b)]	
	Equity Investments—Farrier		2,625[(b)]
	Received cash dividend (equity method).		
Dec. 31	Equity Investments—Farrier	12,500[(c)]	
	Revenue from Investments		12,500[(c)]
	Recorded revenue earned from investment (equity method).		

S10-4
Requirement 2, cont.

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	3,750 shares	×	$16 per share
	=	$60,000		

(b)

Dividend	=	Number of shares	×	Dividend per share
	=	3,750 shares	×	$0.70 per share
	=	$2,625		

(c)

Revenue from investments	=	Net income earned by investee	×	Percentage ownership
	=	$50,000	×	25%[d]
	=	$12,500		

[d] Calculated in Requirement 1.

Requirement 3

Bryant would report the investment (equity method) at $69,875, classified as a long-term asset on the balance sheet as of December 31, 2018.

Calculations:

Equity Investments—Farrier

Jan. 1	60,000	2,625	
			Aug. 1
Dec. 31	12,500		
Bal.			
	69,875		

S10-5
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Feb. 1	Trading Debt Investments	16,800	
	Cash		16,800
	Purchased investment in debt.		
Dec. 31	Fair Value Adjustment—Trading	2,800[a]	
	Unrealized Holding Gain—Trading		2,800[a]
	Adjusted trading debt investment to market value.		

Calculations:

(a)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	$19,600	−	$16,800
	=	$2,800		

Requirement 2

Bell would report the asset (trading debt investment) at its $19,600[a] fair value, classified as a current asset on the balance sheet as of December 31, 2018.

The $2,800[a] market price change in Bell's bond would be reported in the Unrealized Holding Gain—Trading account. (It is also recorded in the Fair Value Adjustment—Trading account, as shown in the December 31 entry in Requirement 1.)

[a] Calculated in Requirement 1.

Requirement 3

The net effect of the investment on Bell's net income for the year ended December 31, 2018, was a $2,800 net increase (the amount of the unrealized holding gain).[a]

[a] Calculated in Requirement 1.

S10-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 1	Available-for-Sale Debt Investments	54,400	
	Cash		54,400
	Purchased investment in bond.		
Dec. 31	Unrealized Holding Loss—Available-for-Sale	3,200[a]	
	Fair Value Adjustment—Available-for-Sale		3,200[a]
	Adjusted available-for-sale debt investment to market value.		

Calculations:

(a)

Unrealized holding loss	=	Total fair value	−	Total cost
	=	$51,200	−	$54,400
	=	$(3,200)		

Requirement 2

Josh would report the asset (available-for-sale debt investment) at its $51,200[a] fair value, classified as a short-term asset on the balance sheet as of December 31, 2018.

The $3,200[a] market price change in Jackrabbit's stock would be reported in the Unrealized Holding Loss—Available-for-Sale account. This account is reported under Accumulated Other Comprehensive Income in the stockholders' equity section of the balance sheet. It is also reported under Other Comprehensive Income on the Statement of Comprehensive Income. (It is also recorded in the Fair Value Adjustment—Available-for-Sale account, as shown in the December 31 entry in Requirement 1.)

[a] Calculated in Requirement 1.

S10-6, cont.
Requirement 3

There was no net effect of the investment on Josh's net income for the year ended December 31, 2018, because the \$3,200[a] unrealized holding loss is not included in net income. (It is included in other comprehensive income, which is subtracted from net income to determine comprehensive income.)

[a] Calculated in Requirement 1.

S10-7

Barot's rate of return on total assets for 2018 is 13% (rounded).

Calculations:

Rate of return on total assets	=	(Net income + Interest expense)	/	Average total assets
	=	(\$3,910 + \$240)	/	\$31,819[a]
	=	0.13 or 13% (rounded)		

[a]

Average total assets	=	(Total assets on Dec. 31 2017 + Total assets on Dec. 31, 2018)	/	2
	=	(\$30,660 + \$32,978)	/	2
	=	\$31,819		

E10-8
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Held-to-Maturity Debt Investments	140,000	
	Cash		140,000
Jun. 30	Cash	2,100[a]	
	Interest Revenue		2,100[a]
Dec. 31	Cash	2,100[a]	
	Interest Revenue		2,100[a]

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	\$140,000	×	3%	×	½
	=	\$2,100				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bond was purchased at face (par) value, rather than at a discount or premium.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2037			
Dec. 31	Cash	140,000	
	Held-to-Maturity Debt Investments		140,000

E10-9
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 2	Held-to-Maturity Debt Investments	1,100,000	
	Cash		1,100,000
	Purchased investment in bonds.		
Jun. 30	Cash	16,500[a]	
	Interest Revenue		16,500[a]
	Received cash interest.		
Dec. 31	Cash	16,500[a]	
	Interest Revenue		16,500[a]
	Received cash interest.		

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	$1,100,000	×	3%	×	½
	=	$16,500				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bonds were purchased at face (par) value, rather than at a discount or premium.

Requirement 2

Advance will receive cash interest of $33,000 each year from FermaCo.

Calculations:

Total cash interest received each year	=	Semiannual cash interest received	×	2
	=	$16,500[a]	×	2
	=	$33,000		

E10-9, cont.
Requirement 2, cont.

Alternatively:

Total cash interest received each year	=	Face (par) value	×	Annual stated rate
	=	$1,100,000	×	3%
	=	$33,000		

Requirement 3

Advance will report interest revenue of $33,000 during 2018 on this bond investment. (Annual interest revenue is equal to the annual cash interest received, calculated in Requirement 2, because the bonds were purchased at face (par) value, rather than at a discount or premium.)

E10-10

Requirement 1

League Up would report the bond investment as a held-to-maturity debt investment classified as a long-term asset on the December 31, 2018 balance sheet.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2022			
(a) Dec. 31	Cash	36,000[(a)]	
	Interest Revenue		36,000[(a)]
	Received cash interest.		
(b) Dec. 31	Cash	900,000	
	Held-to-Maturity Debt Investments		900,000
	Disposed of bond at maturity.		

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	$900,000	×	8%	×	½
	=	$36,000				

E10-11
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 5	Available-for-Sale Debt Investments	400,000	
	Cash		400,000
	Purchased investment in bond.		
Jun. 30	Cash	8,000[a]	
	Interest Revenue		8,000[a]
	Received cash interest.		
Dec. 31	Cash	8,000[a]	
	Interest Revenue		8,000[a]
	Received cash interest.		
Dec. 31	Unrealized Holding Loss—Available-for-Sale	4,000[b]	
	Fair Value Adjustment—Available-for-Sale		4,000[b]
	Adjusted available-for-sale debt investment to market value.		

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	$400,000	×	4%	×	½
	=	$8,000				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bond was purchased at face (par) value, rather than at a discount or premium.

(b)

Unrealized holding loss	=	Total fair value	−	Total cost
	=	$396,000	−	$400,000
	=	$(4,000)		

E10-11, cont.
Requirement 2

PEYTON INVESTMENTS
Balance Sheet (Partial)
December 31, 2018

Assets	
Long-term Assets:	
Available-for-Sale Debt Investments (at fair value; cost $400,000[a])	$ 396,000[a]
Stockholders' Equity	
Accumulated Other Comprehensive Income:	
Unrealized Holding Loss—Available-for-Sale Debt Investments	$ (4,000)

Requirement 3

PEYTON INVESTMENTS
Comprehensive Income Statement
For the Year Ended December 31, 2018

Net Income	$ 200,000
Other Comprehensive Income:	
Unrealized Holding Loss—Available-for-Sale Debt Investments	(4,000)[a]
Comprehensive Income	$ 196,000

[a] Calculated in Requirement 1.

E10-12
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 14	Equity Investments	40,000[(a)]	
	Cash		40,000[(a)]
Aug. 22	Cash	192[(b)]	
	Dividend Revenue		192[(b)]
Dec. 31	Unrealized Holding Loss—Equity Investments	4,000[(c)]	
	Fair Value Adjustment—Equity Investments		4,000[(c)]
Dec. 31	No entry required.[(e)]		

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	800 shares	×	$50 per share
	=	$40,000		

(b)

Dividend received	=	Number of shares	×	Dividend per share
	=	800 shares	×	$0.24 per share
	=	$192		

(c)

Unrealized holding loss	=	Total fair value	−	Total cost
	=	$36,000[(d)]	−	$40,000
	=	$(4,000)		

(d)

Total fair value	=	Number of shares	×	Market value (fair value) per share
	=	800 shares	×	$45 per share
	=	$36,000		

(e) For equity investments that have no significant control, net income earned by the investee is not recorded by the investor.

E10-12, cont.
Requirement 2

STRATEGIC INVESTMENTS Balance Sheet (Partial) December 31, 2018

Assets	
Long-term Assets:	
Equity Investments (at fair value; cost $40,000[a])	$ 36,000[a]

Requirement 3

STRATEGIC INVESTMENTS Income Statement (Partial) For the Year Ended December 31, 2018

Other Income and (Expenses):	
Unrealized Holding Loss—Equity Investments	$ (4,000)[a]
Dividend Revenue	192

[a] Calculated in Requirement 1.

E10-13
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 14	Equity Investments	10,600[(a)]	
	Cash		10,600[(a)]
Aug. 22	Cash	56[(b)]	
	Dividend Revenue		56[(b)]
Dec. 31	Fair Value Adjustment—Equity Investments	1,000[(c)]	
	Unrealized Holding Gain—Equity Investments		1,000[(c)]

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	200 shares	×	$53 per share
	=	$10,600		

(b)

Dividend received	=	Number of shares	×	Dividend per share
	=	200 shares	×	$0.28 per share
	=	$56		

(c)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	$11,600[(d)]	−	$10,600
	=	$1,000		

(d)

Total fair value	=	Number of shares	×	Market value (fair value) per share
	=	200 shares	×	$58 per share
	=	$11,600		

E10-13, cont.
Requirement 2

Captain would report the $1,000[a] unrealized holding gain on its income statement for the year ended December 31, 2018, classified as Other Income and (Expenses). Dividend revenue of $56 would also be reported on the income statement as Other Income and (Expenses).

[a] Calculated in Requirement 1.

E10-14
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 14	Equity Investments—Technomite	22,400[a]	
	Cash		22,400[a]
Aug. 22	Cash	108[b]	
	Equity Investments—Technomite		108[b]
Dec. 31	No entry required[c]		
31	Equity Investments—Technomite	45,000[d]	
	Revenue from Investments		45,000[d]

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	400 shares	×	$56 per share
	=	$22,400		

(b)

Dividend received	=	Number of shares	×	Dividend per share
	=	400 shares	×	$0.27 per share
	=	$108		

(c) For significant interest investments (equity method), no adjustment to market value is made.

(d)

Revenue from investments	=	Net income earned by investee	×	Percentage ownership
	=	$180,000	×	25%
	=	$45,000		

E10-14, cont.
Requirement 2

The investment (equity-method) is classified as a long-term asset on the balance sheet at December 31, 2018, and the revenue from investments is classified as Other Income and (Expenses) on the income statement for the year ended December 31, 2018.

MONEY MAN INVESTMENTS Balance Sheet (Partial) December 31, 2018	
Long-term Assets:	
Equity Investments—Technomite (equity method)	$ 67,292[a]

MONEY MAN INVESTMENTS Income Statement (Partial) For the Year Ended December 31, 2018	
Other Income and (Expenses):	
Revenue from Investments	$ 45,000[b]

Calculations:

(a)

Equity Investments—Technomite

Jan. 14	22,400[b]	108[b]	Aug. 22
Dec. 31	45,000[b]		
Bal.	67,292		

(b) Calculated in Requirement 1.

E10-15
Requirement 1

East Coast Motors should use the equity method to account for the investment in Boxcar Motors because the investment is in equity securities and East Coast Motors owns 35% of Boxcar Motors' outstanding voting stock and has significant influence over Boxcar (which meets the criterion for classification as a significant interest investment for which the equity method is used: 20% to 50% of the investee's outstanding voting stock).

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 6	Equity Investments—Boxcar Motors	280,000,000	
	Cash		280,000,000
	Purchased investment in stock (equity method).		
	Cash	15,750,000[a]	
	Equity Investments—Boxcar Motors		15,750,000[a]
	Received cash dividend (equity method).		
	Equity Investments—Boxcar Motors	31,500,000[b]	
	Revenue from Investments		31,500,000[b]
	Recorded revenue earned from investment (equity method).		

Calculations:

(a)

Dividend received	=	Total dividend paid by investee	×	Percentage ownership
	=	$45,000,000	×	35%
	=	$15,750,000		

(b)

Revenue from investments	=	Net income earned by investee	×	Percentage ownership
	=	$90,000,000	×	35%
	=	$31,500,000		

E10-15, cont.
Requirement 3

Equity Investments – Boxcar Motors		
Jan. 6	280,000,000	15,750,000[a]
	31,500,000[a]	
Bal.	295,750,000	

The balance in Equity Investments—Boxcar Motors after all transactions are posted is $295,750,000. The investment (equity method) is classified as a long-term asset on the balance sheet at December 31, 2018.

[a] Calculated in Requirement 2.

E10-16
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 6	Equity Investments	60,000[a]	
	Cash		60,000[a]
23	Cash	3,750[b]	
	Dividend Revenue		3,750[b]
31	Unrealized Holding Loss—Equity Investments	32,500[c]	
	Fair Value Adjustment—Equity Investments		32,500[c]
2019			
Jan. 27	Cash	45,500[e]	
	Loss on Disposal	14,500[f]	
	Equity Investments*		60,000[a]

* The associated balance in the unrealized holding loss—equity account would need to be removed at year end if no other equity investments were held.

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	2,500 shares	×	$24.00 per share
	=	$60,000		

(b)

Total dividend received	=	Number of shares	×	Dividend per share
	=	2,500 shares	×	$1.50 per share
	=	$3,750		

(c)

Unrealized holding loss	=	Total fair value	−	Total cost
	=	$27,500[d]	−	$60,000
	=	$(32,500)		

(d)

Total fair value = $11.00 × 2,500 = $27,500

E10-16
Requirement 1, cont.

(e)

Total cash received	=	Number of shares	×	Cash received per share
	=	2,500 shares	×	$18.20 per share
	=	$45,500		

(f)

Loss on disposal	=	Total cash received	−	Total cost
	=	$45,500[f]	−	$60,000[a]
	=	$(14,500)		

Requirement 2

Boston Today would report the equity investment at its $27,500[a] fair value, classified as a current asset on the balance sheet at December 31, 2018.

[a] Calculated in Requirement 1.

E10-17

The rate of return on total assets for 2018 is 9.13% (rounded).

Calculations (dollar amounts in thousands):

Rate of return on total assets	=	(Net income + Interest expense)	/	Average total assets
	=	(\$16,900[a] + \$16,700[a])	/	\$368,000[b]
	=	0.0913 or 9.13% (rounded)		

[a] Amounts for 2018 (rather than 2017) since the rate of return is for 2018.

[b]

Average total assets	=	(Total assets on Dec. 31, 2017 + Total assets on Dec. 31, 2018)	/	2
	=	(\$420,000 + \$316,000)	/	2
	=	\$368,000		

P10-18A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Held-to-Maturity Debt Investments	500,000	
	Cash		500,000
	Purchased investment in bonds.		
Jun. 30	Cash	15,000[a]	
	Interest Revenue		15,000[a]
	Received cash interest.		
Dec. 31	Cash	15,000[a]	
	Interest Revenue		15,000[a]
	Received cash interest.		

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	$500,000	×	6%	×	½
	=	$15,000				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bonds were purchased at face (par) value, rather than at a discount or premium.

P10-18A, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2022			
Dec. 31	Cash	500,000	
	Held-to-Maturity Debt Investments		500,000
	Disposed of bond at maturity.		

P10-19A
Requirement 1

The investment in Pogo, Inc. is an equity investment with no significant influence. The Violet bond is a bond investment classified as a trading debt investment.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 2	Equity Investments	50,400[a]	
	Cash		50,400[a]
Aug. 21	Cash	3,360[b]	
	Dividend Revenue		3,360[b]
Sep. 16	Cash	56,280[d]	
	Equity Investments		50,400[a]
	Gain on Disposal		5,880[c]
Oct. 1	Trading Debt Investments	20,000	
	Cash		20,000
Dec. 31	Cash	100	
	Interest Revenue		100
Dec. 31	Fair Value Adjustment—Trading	2,000[e]	
	Unrealized Holding Gain—Trading		2,000[e]

P10-19A, cont.
Requirement 2, cont.

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	4,200 shares	×	$12.00 per share
	=	$50,400		

(b)

Total dividend received	=	Number of shares	×	Dividend per share
	=	4,200 shares	×	$0.80 per share
	=	$3,360		

(c)

Gain on disposal	=	Total cash received	−	Total cost
	=	$56,280[d]	−	$50,400[a]
	=	$5,880		

(d)

Total cash received	=	Number of shares	×	Cash received per share
	=	4,200 shares	×	$13.40 per share
	=	$56,280		

(e)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	$22,000	−	$20,000
	=	$2,000		

P10-19A, cont.
Requirement 3

Equity Investments			
Jul. 2	50,400[a]	50,400[a]	Sep. 16
Bal.	0		

Trading Debt Investments			
Oct. 1	20,000[a]		
Bal.	20,000		

Fair Value Adjustment—Trading			
Dec. 31	2,000[a]		
Bal.	2,000		

JETWAY CORPORATION
Balance Sheet (Partial)
December 31, 2018

Current Assets:	
Trading Debt Investments (at fair value; cost $20,000[a])	$ 22,000[a]

[a] Calculated in Requirement 2.

Requirement 4

The unrealized holding gain associated with the trading debt investment is reported in the Other Income and (Expenses) section on the income statement.

P10-20A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 3	Equity Investments	44,000[a]	
	Cash		44,000[a]
	Purchased investment in stock.		
May 15	Cash	2,440[b]	
	Dividend Revenue		2,440[b]
	Received cash dividend.		
Dec. 15	Cash	70,000	
	Equity Investments—Evan		70,000
	Received cash dividend (equity method).		
31	Equity Investments—Evan	60,000[c]	
	Revenue from Investments		60,000[c]
	Recorded revenue earned from investment (equity method).		
31	No entry required[d]		
31	No entry required[e]		
31	Fair Value Adjustment—Equity Investments	4,000[f]	
	Unrealized Holding Gain—Equity Investments		4,000[f]
	Adjusted equity investment to market value.		

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	4,000 shares	×	$11 per share
	=	$44,000		

(b)

Total dividend received	=	Number of shares	×	Dividend per share
	=	4,000 shares	×	$0.61 per share
	=	$2,440		

P10-20A, cont.
Requirement 1, cont.

(c)

Revenue from investments	=	Net income earned by investee	×	Percentage ownership
	=	\$300,000	×	20%
	=	\$60,000		

(d) For equity investments with no significant influence, net income earned by the investee is not recorded by the investor.

(e) For significant interest investments (equity method), no adjustment to market value is made.

(f)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	\$48,000(g)	−	\$44,000
	=	\$4,000		

(g)

Total fair value	=	Number of shares	×	Fair value per share
	=	4,000 shares	×	\$12 per share
	=	\$48,000		

P10-20A, cont.
Requirement 2

Equity Investments

Mar. 3	44,000[a]		
Bal.	44,000		

Fair Value Adjustment—Equity Investments

Dec. 31	4,000[a]		
Bal.	4,000		

Equity Investments—Evan

Beg.	400,000	70,000	Dec. 15
Dec. 31	60,000[a]		
Bal.	390,000		

Dividend Revenue

		2,440[a]	May 15
		2,440	Bal.

Unrealized Holding Gain—Equity Investments

		4,000[a]	Dec. 31
		4,000	Bal.

Revenue from Investments

		60,000[a]	Dec. 31
		60,000	Bal.

[a] Calculated in Requirement 1.

Requirement 3

WATERFALL SOURCE CO.
Balance Sheet (Partial)
December 31, 2018

Assets	
Long-term Assets:	
Equity Investments (at fair value; cost $44,000[a])	$48,000[a]
Equity Investments—Evan (equity method)	390,000[b]

[a] Calculated in Requirement 1.

[b] Calculated in Requirement 2.

Requirement 4
The unrealized holding gain associated with the Lili stock is included on the income statement in Other Income and (Expenses).

Problems (Group B)

P10-21B

Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Held-to-Maturity Debt Investments	800,000	
	Cash		800,000
	Purchased investment in bonds.		
Jun. 30	Cash	14,000[(a)]	
	Interest Revenue		14,000[(a)]
	Received cash interest.		
Dec. 31	Cash	14,000[(a)]	
	Interest Revenue		14,000[(a)]
	Received cash interest.		

Calculations:

(a)

Semiannual interest payment received	=	Face (par) value	×	Annual stated rate	×	½
	=	\$800,000	×	3.5%	×	½
	=	\$14,000				

Semiannual interest revenue is equal to the semiannual interest payment received, because the bonds were purchased at face (par) value, rather than at a discount or premium.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2022			
Dec. 31	Cash	800,000	
	Held-to-Maturity Debt Investments		800,000
	Disposed of bond at maturity.		

P10-22B
Requirement 1

The investment in Naradon, Inc. is an equity investment with no significant influence. The Purple bond is a bond investment classified as a trading debt investment.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 2	Equity Investments	54,600[a]	
	Cash		54,600[a]
Aug. 21	Cash	1,680[b]	
	Dividend Revenue		1,680[b]
Sep. 16	Cash	57,540[d]	
	Equity Investments		54,600[a]
	Gain on Disposal		2,940[c]
Oct. 1	Trading Debt Investments	40,000	
	Cash		40,000
Dec. 31	Cash	600	
	Interest Revenue		600
Dec. 31	Fair Value Adjustment—Trading	4,000[e]	
	Unrealized Holding Gain—Trading		4,000[e]

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	4,200 shares	×	$13.00 per share
	=	$54,600		

(b)

Total dividend received	=	Number of shares	×	Dividend per share
	=	4,200 shares	×	$0.40 per share
	=	$1,680		

P10-22B, cont.
Requirement 2, cont.

(c)

Gain on disposal	=	Total cash received	−	Total cost
	=	$57,540[d]	−	$54,600
	=	$2,940		

(d)

Total cash received	=	Number of shares	×	Cash received per share
	=	4,200 shares	×	$13.70 per share
	=	$57,540		

(e)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	$44,000	−	$40,000
	=	$4,000		

Requirement 3

Equity Investments

Jul. 2	54,600[a]	54,600[a]	Sep. 16
Bal.	0		

Trading Debt Investments

Oct. 1	40,000[a]		
Bal.	40,000		

Fair Value Adjustment—Trading

Dec. 31	4,000[a]		
Bal.	4,000		

CAPTAIN TRANSFER CORPORATION
Balance Sheet (Partial)
December 31, 2018

Current Assets:	
Trading Debt Investments (at fair value; cost $40,000[a])	$ 44,000[a]

[a] Calculated in Requirement 2.

Requirement 4

The unrealized holding gain associated with the trading debt investment is reported in the Other Income and (Expenses) section on the income statement.

P10-23B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Mar. 3	Equity Investments	65,000[a]	
	Cash		65,000[a]
	Purchased investment in stock.		
May 15	Cash	3,450[b]	
	Dividend Revenue		3,450[b]
	Received cash dividend.		
Dec. 15	Cash	100,000	
	Equity Investments—Taylor		100,000
	Received cash dividend (equity method).		
31	Equity Investments—Taylor	20,000[c]	
	Revenue from Investments		20,000[c]
	Recorded revenue earned from investment (equity method).		
31	No entry required[d]		
31	No entry required[e]		
31	Fair Value Adjustment—Equity Investments	5,000[f]	
	Unrealized Holding Gain—Equity Investments		5,000[f]
	Adjusted equity investment to market value.		

Calculations:

(a)

Total cost	=	Number of shares	×	Price per share
	=	5,000 shares	×	$13 per share
	=	$65,000		

(b)

Total dividend received	=	Number of shares	×	Dividend per share
	=	5,000 shares	×	$0.69 per share
	=	$3,450		

Requirement 1, cont.

(c)

Revenue from investments	=	Net income earned by investee	×	Percentage ownership
	=	$100,000	×	20%
	=	$20,000		

(d) For equity investments with no significant influence, net income earned by the investee is not recorded by the investor.

(e) For significant interest investments (equity method), no adjustment to market value is made.

(f)

Unrealized holding gain	=	Total fair value	−	Total cost
	=	$70,000[g]	−	$65,000
	=	$5,000		

(g)

Total fair value	=	Number of shares	×	Fair value per share
	=	5,000 shares	×	$14 per share
	=	$70,000		

Requirement 2

Equity Investments

Mar. 3	65,000[a]		
Bal.	65,000		

Fair Value Adjustment—Equity Investments

Dec. 31	5,000[a]		
Bal.	5,000		

Equity Investments—Taylor

Beg.	700,000	100,000	Dec. 15
Dec. 31	20,000[a]		
Bal.	620,000		

Dividend Revenue

		3,450[a]	May 15
		3,450	Bal.

Unrealized Holding Gain—Equity Investments

		5,000[a]	Dec. 31
		5,000	Bal.

Revenue from Investments

		20,000[a]	Dec. 31
		20,000	Bal.

(a) Calculated in Requirement 1.

P10-23B, cont.
Requirement 3

TEXT SOURCE CO. Balance Sheet (Partial) December 31, 2018	
Assets	
Long-term Assets:	
Equity Investments (at fair value; cost $65,000[a])	$ 70,000[a]
Equity Investments—Taylor (equity method)	620,000[b]

[a] Calculated in Requirement 1.

[b] Calculated in Requirement 2.

Requirement 4
The unrealized holding gain associated with the Josh stock is included on the income statement in Other Income and (Expenses).

Using Excel

P10-24

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P10-25
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2019			
Jul. 1	Equity Investments	24,000	
	Cash		24,000
	Purchased investment in stock.		
7	Equity Investments—Bison	218,750	
	Cash		218,750
	Purchased investment in stock (equity method).		
10	Held-to-Maturity Debt Investment	80,000	
	Cash		80,000
	Purchased investment in bonds.		
Sep. 30	Cash	1,200	
	Dividend Revenue		1,200
	Received cash dividends.		
Nov. 1	Cash	13,125	
	Equity Investments—Bison		13,125
	Received cash dividends (equity method).		
Dec. 31	Cash	3,200	
	Interest Revenue		3,200
	Received cash interest.		
	Equity Investments—Bison	5,250	
	Revenue from Investments		5,250
	Recorded revenue earned from investment.		
	Unrealized Holding Loss—Equity Investment	160	
	Fair Value Adjustment—Equity Investment		160
	Adjusted equity investment to market value.		

P10-25, cont.
Requirement 1, cont.

Calculations:

Cost of investments:

Total cost	=	Number of shares	×	Price per share		
Adobe	=	8,000 shares	×	$3 per share	=	$ 24,000
Bison	=	43,750 shares	×	$5 per share	=	218,750

Cash dividends:

Total dividends	=	Number of shares	×	Dividend per share		
Adobe	=	8,000 shares	×	$0.15 per share	=	$ 1,200
Bison	=	43,750 shares	×	$0.30 per share	=	13,125

Share of net income:

Revenue from investment	=	Reported net income	×	Percent ownership × $\frac{\text{Number of Months Held}}{12}$
Bison	=	$30,000	×	35% × 6/12
	=	$5,250		

Unrealized holding loss:

Unrealized holding loss	=	Total fair value	−	Total cost
Adobe	=	(8,000 shares × $2.98 per share)	−	$24,000
	=	$23,840	−	$24,000
	=	$160		

Requirement 2

Investment	**Account**	**Effect on Income**	
Adobe	Dividend Revenue	$ 1,200	
	Unrealized Holding Loss—Equity Investment	(160)	
		$ 1,040	Increase
Bison	Revenue from Investments	$ 5,250	Increase
Camelot	Interest Revenue	$ 3,200	Increase

Critical Thinking

Tying It All Together Case 10-1
Requirement 1

Berkshire Hathaway, Inc.'s investment in securities with fixed maturities include U.S. Treasury, U.S. government corporations and agencies, states, municipalities, and political subdivisions, foreign governments, corporate bonds, and mortgage-backed securities.

Requirement 2

The company held investments in equity securities in the following industries: banks, insurance and finance, consumer products, and commercial, industrial and other. Approximately 59% of the aggregate fair value was concentrated in American Express, Wells Fargo & Company, IBM, and The Coca-Cola Company.

Requirement 3

Held-to-maturity investments are carried at amortized cost. Trading investments are carried at fair value. All other securities are classified as available-for-sale and are carried at fair value with net unrealized gains or losses reported as a component of accumulated other comprehensive income. In addition, the equity method is used for all investments that the company has the ability to exercise significant influence but not control.

Decision Case 10-1
Requirement 1

As Hardy Rock indicates, companies should make the best use of excess cash. Because, as a result of temporary or seasonal business fluctuations, Rock Designs Inc. has short-term excess cash that isn't needed for normal operations in the next three months, the company should consider investing in short-term debt and equity investments to generate investment income. In the case of an equity security, the investor owns less than 20% of the investee's outstanding voting stock and does not have significant influence. Investment income may come from interest earned from debt investments, dividends earned from stock investments, and/or increases in the market value of the securities.

Student answers will vary.

Requirement 2

Student answers will vary. Current market, economic, and business conditions will significantly affect students' analyses and recommendations.

Ethical Issue 10-1
Requirement 1

If losses to mortgage receivables and other assets based on the decline in these assets' fair values are not reported, then assets would be overstated on the balance sheet and net income would be overstated on the income statement (stockholders' equity overstated on balance sheet). This could mislead investors, creditors, and other stakeholders, because the company's financial results and position would not be accurately presented. As a result, stakeholders would make decisions based on incorrect financial data.

Requirement 2

If losses to mortgage receivables and other assets based on the decline in these assets' fair values are not reported, the fundamental ethical issues involved are integrity, credibility, and competence. Part of management accountability is managers' responsibility to the various stakeholders of the company, including customers, creditors, owners, employees, suppliers, governments, and the community—all parties who have an interest in what the company does, and how it is done.

In fulfilling their responsibilities, managers must:

- Communicate information fairly and objectively.
- Provide decision support information and recommendations that are accurate, clear, and timely.
- Disclose all relevant information that could be expected to influence an intended user's understanding of reports, analyses, or recommendations.
- Refrain from engaging in any conduct or activities that would prejudice carrying out duties ethically.

Not reporting losses to mortgage receivables and other assets based on the decline in these assets' fair values violates all of the foregoing and is also fraudulent (intent to deceive). The misstatement of financial results and position would mislead stakeholders who rely on accurate, fair, objective, and timely information when making decisions about a company. Additionally, if discovered, fraudulent reporting would harm a company's reputation and cause stakeholders to question management's integrity, ethics, and credibility.

Fraud Case 10-1
Requirement 1

The adjustment, a reclassification of long-term investments from long-term assets to current assets on the balance sheet, caused an overstatement of reported current assets (and an understatement of long-term assets). The overstatement of current assets caused an overstatement of the company's current ratio[a] (holding current liabilities constant).

[a] Current Ratio = Current assets / Current liabilities

Fraud Case 10-1, cont.
Requirement 2

Wild Adventure is required to disclose the reclassification in the notes to its financial statements. If this disclosure had been intentionally omitted, the bank could detect the reclassification by comparing the long-term investments reported on the prior year's balance sheet to those reported in the current year's balance sheet—observing that the company's reported long-term investments had dropped to zero, the bank should have requested additional details from the company.

Requirement 3

A fraud has occurred. There was an intent to deceive. Included in ethical behavior are integrity, credibility, and competence. Part of management accountability is managers' responsibility to the various stakeholders of the company—all parties who have an interest in what the company does, and how it is done. These include creditors, such as First Bank.

In fulfilling their responsibilities, managers must:

- Communicate information fairly and objectively.
- Provide decision support information and recommendations that are accurate, clear, and timely.
- Disclose all relevant information that could be expected to influence an intended user's understanding of reports, analyses, or recommendations.
- Refrain from engaging in any conduct or activities that would prejudice carrying out duties ethically.

The reclassification violates all of the foregoing and is fraudulent (intent to deceive). The misstatement of financial results and position—including the overstatement of the current ratio—intentionally misled the bank that relies on accurate, fair, objective, and timely information when making loan decisions about a company.

Financial Statement Case 10-1
Requirement 1

Target's rate of return on total assets for year ended January 30, 2016 is 10% (rounded).

Calculations (in millions):

Rate of return on total assets	=	(Net income + Interest expense)	/	Average total assets
	=	($3,363 + $607)	/	$40,717[a]
	=	0.098 or 10% (rounded)		

(a)

Average total assets	=	(Total assets on Jan. 31, 2015 + Total assets on Jan. 30, 2016)	/	2
	=	($41,172 + $40,262)	/	2
	=	$40,717		

Requirement 2
Kohl's Corporation's rate of return on total assets for the year ending January 30, 2016 was 7% compared to Target's return of 10%. Kohl's Corporation's is only earning $0.07 in profits for every $1.00 invested while Target corporation is earning $0.10 per every $1.00. This difference is due to Kohl's Corporation's smaller net income relative to total assets for the year.

Communication Activity 10-1

Trading debt investments, categorized as current assets, are debt securities the investor plans to sell in the very near future with the intent of generating a profit on a quick sale.
Available-for-sale debt investments are debt securities that aren't trading or held-to-maturity debt investments. Available-for-sale debt investments are categorized as current assets if the investor expects to sell them within one year and long-term assets if the investor plans to hold them longer than a year.

An adjustment must be made at the end of the period for both trading and available-for-sale debt investments to bring the investment accounts to market value. An unrealized holding gain or loss on trading debt investments is classified as Other Income and (Expenses) on the income statement. Those on available-for-sale debt investments are included in other comprehensive income (and added to net income to determine comprehensive income), not net income.

11 Current Liabilities and Payroll

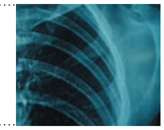
How Much Does One Employee Cost?

Mary Green, MD, recently opened a health care clinic, Family Medicine, that serves low-income families and uninsured individuals. Family Medicine prides itself on keeping its costs low but still providing excellent health care to its patients. When Mary opened the clinic, she hired only one part-time nurse. Now, with the clinic growing, Mary is considering hiring several more nurses and another doctor.

Mary knows that having employees is expensive. Not only does the business have to pay their wages, but there are additional payroll taxes that must be paid. As Mary is deciding what salary to offer her new employees, she must consider these additional costs. She knows that if she offers the new doctor a salary of $100,000, the business will end up paying more than $100,000. This is because of additional payroll taxes such as Social Security and unemployment compensation. In addition, Family Medicine will need to offer health care and retirement benefits to each employee. All of these extra expenses cost money—money she could be saving. But Mary knows that in order to provide the quality of service her patients expect, she must pay the cost of having quality employees.

How Do Businesses Account for Current Liabilities and Payroll?

We now begin our focus on liabilities, or debts, a business owes. Payroll is one of those liabilities. Companies such as **UnitedHealth Group Incorporated,** a leading health care company that serves more than 85 million people, value hiring smart, committed, and talented people. Part of UnitedHealth's recruiting package is the salary it offers employees. In addition, UnitedHealth Group also offers benefits such as vacation, health care, and retirement to reward its employees. Payroll and employee benefits are reported as current liabilities on the balance sheet until the company makes payment. In this chapter, we look at how businesses, such as UnitedHealth Group, account for and record payroll and other current liabilities.



Chapter 11 Learning Objectives

1 Account for current liabilities of known amount

2 Calculate and journalize basic payroll transactions

3 Account for current liabilities that must be estimated

4 Account for contingent liabilities

5 Use the times-interest-earned ratio to evaluate business performance

Up to this point, we've been focusing on all the assets a corporation owns. But what about the bills a business owes? A business needs to know what it owes (liabilities) and by what date they have to be paid. Why? To be sure the business has cash on hand to pay these bills. In this chapter, we focus on some common current liabilities a business may owe. As with other chapters, we'll continue to focus on Smart Touch Learning and see how it manages its current liabilities.

HOW ARE CURRENT LIABILITIES OF KNOWN AMOUNTS ACCOUNTED FOR?

Learning Objective 1
Account for current liabilities of known amount

Liabilities are debts that are owed to creditors. Liabilities have three main characteristics:

1. They occur because of a past transaction or event.
2. They create a present obligation for future payment of cash or services.
3. They are an unavoidable obligation.

Liabilities can be split into two main categories: current and long-term. In this chapter, we discuss current liabilities. **Current liabilities** must be paid either with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.

Liabilities
Debts that are owed to creditors.

Current Liability
A liability that must be paid with cash or with goods and services within one year or within the entity's operating cycle, whichever is longer.

Accounts Payable, Notes Payable due within one year, Salaries Payable, Interest Payable, Unearned Revenue, and Income Tax Payable are all current liabilities. Any portion of a long-term liability that is due within the next year is also reported as a current liability. Current liabilities are listed on the balance sheet in the order in which they are due.

Long-term liabilities are liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Many Notes Payable are long-term, such as a mortgage on a building. We will explore more about long-term liabilities in the next chapter.

Long-term Liability
A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.

The amounts of most liabilities are known. For example, a business receives a bill that is due in 30 days or a business takes out a 90-day loan from a bank. We will begin our discussion with current liabilities of a known amount.

Accounts Payable

Amounts owed for products or services purchased on account are *accounts payable*. Because these are typically due in 30 days, they are current liabilities. We have seen many accounts payable illustrations in preceding chapters. Businesses can record accounts payable for the purchase of goods or for the receipt of services. Accounts payable occur because the business receives the goods or services before payment has been made.

IFRS

IFRS defines current and long-term liabilities in the same manner as GAAP.

Sales Tax Payable

Most states assess sales tax on retail sales. Retailers collect the sales tax in addition to the price of the item sold. Sales Tax Payable is a current liability because the retailer must pay the state in less than a year. Sales tax is usually calculated as a percentage of the amount of the sale.

For example, suppose December's taxable sales for Smart Touch Learning totaled $10,000. The company collected an additional 6% sales tax, which would equal $600 ($10,000 × 0.06). The accounting clerk would record that month's cash sales as follows:

A↑	=	L↑	+	E↑
Cash↑		Sales Tax Payable↑		Sales Revenue↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	10,600	
	Sales Revenue		10,000
	Sales Tax Payable ($10,000 × 0.06)		600
	To record cash sales and the related sales tax.		

Sales tax is not an expense of the business. It is a current liability. Companies collect the sales tax and then forward it to the state at regular intervals. They normally submit it monthly, but they could file it at other intervals, depending on the state and the amount of the tax. To pay the tax, the company debits Sales Tax Payable and credits Cash.

A↓	=	L↓	+	E
Cash↓		Sales Tax Payable↓		

Date	Accounts and Explanation	Debit	Credit
Jan. 20	Sales Tax Payable	600	
	Cash		600
	To record cash payment for sales tax payable.		

Income Tax Payable

The federal government and many state governments require corporations to pay income tax on their net income. Federal income taxes are calculated on a corporate tax return, referred to as a Form 1120. The amount of taxes that the corporation owes but has not yet paid is classified as Income Tax Payable and is reported as a current liability on the balance sheet.

For example, assume that Smart Touch Learning incurred federal income tax payable of $3,780. Smart Touch Learning would record the following journal entry:

A	=	L↑	+	E↓
		Income Tax Payable↑		Income Tax Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Tax Expense	3,780	
	Income Tax Payable		3,780
	To record income tax expense incurred.		

When Smart Touch Learning files its Form 1120 corporate tax return and makes payment, the corporation will record the following entry:

Date	Accounts and Explanation	Debit	Credit
Mar. 15	Income Tax Payable	3,780	
	Cash		3,780
	To record cash payment for income tax payable.		

A↓	=	L↓	+	E
Cash↓		Income Tax Payable↓		

Unearned Revenues

Unearned revenue is also called *deferred revenue*. Unearned revenue arises when a business has received cash in advance of providing goods or performing work and, therefore, has an obligation to provide goods or services to the customer in the future. Unearned revenues are current liabilities until they are earned.

Suppose Smart Touch Learning received $900 in advance on May 21 for a month's work beginning on that date. On May 21, because it received cash before earning the revenue, the company has a liability to perform work for the client. The liability is called *Unearned Revenue*. The entry made by the accounting clerk on May 21 follows:

Date	Accounts and Explanation	Debit	Credit
May 21	Cash	900	
	Unearned Revenue		900
	Collected cash for future services.		

A↑	=	L↑	+	E
Cash↑		Unearned Revenue↑		

During May, Smart Touch Learning delivered one-third of the work and earned $300 ($900 × 1/3) of the revenue. On May 31, the accounting clerk would record the following adjusting entry to show that some work had been completed and some revenue had now been earned:

Date	Accounts and Explanation	Debit	Credit
May 31	Unearned Revenue	300	
	Service Revenue		300
	To record service revenue earned that was collected in advance.		

A	=	L↓	+	E↑
		Unearned Revenue↓		Service Revenue↑

At this point, Smart Touch Learning has earned $300 of the revenue and still owes $600 of work to the customer as shown in the T-accounts:

Unearned Revenue

May 31	300	900	May 21
		600	**Bal.**

Service Revenue

		300	May 31

Short-term Notes Payable

Short-term notes payable are a common form of financing. Short-term notes payable represent a written promise by the business to pay a debt, usually involving interest, within one year or less. Assume on May 1, Smart Touch Learning purchased merchandise

Short-term Note Payable
A written promise made by the business to pay a debt, usually involving interest, within one year or less.

inventory with a 10%, 90-day note payable, for $8,000. The company uses the perpetual inventory system. The entry to record the note and purchase of inventory follows:

A↑	=	L↑	+	E
Merchandise Inventory↑		Notes Payable↑		

Date	Accounts and Explanation	Debit	Credit
May 1	Merchandise Inventory	8,000	
	Notes Payable		8,000
	Purchased merchandise inventory in exchange for 90-day, 10% note.		

On July 30, when the note is due, Smart Touch Learning will pay the note plus interest and record the following entry:

A↓	=	L↓	+	E↓
Cash↓		Notes Payable↓		Interest Expense↑

Date	Accounts and Explanation	Debit	Credit
Jul. 30	Notes Payable	8,000	
	Interest Expense ($8,000 × 0.10 × 90/365)	197*	
	Cash		8,197
	Paid note and interest at maturity.		

*rounded

Remember that the calculation for interest is principal × interest rate × time.

Businesses occasionally borrow cash from banks. The bank requires the business to sign a *promissory note* that states that the business will pay the *principal* plus *interest* at a specified *maturity date.* As an example, assume that on November 1, 2018, Smart Touch Learning borrows $10,000 from First Street Bank at 6% for five months. On November 1, the accounting clerk records the following entry:

A↑	=	L↑	+	E
Cash↑		Notes Payable↑		

Date	Accounts and Explanation	Debit	Credit
2018			
Nov. 1	Cash	10,000	
	Notes Payable		10,000
	Received cash in exchange for 5-month, 6% note.		

At year-end, the matching principle requires the business to accrue interest expense for November and December as follows:

A	=	L↑	+	E↓
		Interest Payable↑		Interest Expense↑

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Interest Expense ($10,000 × 0.06 × 2/12)	100	
	Interest Payable		100
	Accrued interest expense at year-end.		

The interest accrual at December 31, 2018, allocated $100 of the interest on this note to 2018. During 2019, the interest on this note for the three remaining months is $150. When Smart Touch Learning records payment for the note, it will record the remaining interest expense and also remove the interest payable and note payable from the books as shown:

Date	Accounts and Explanation	Debit	Credit
2019			
Apr. 1	Notes Payable	10,000	
	Interest Expense ($10,000 × 0.06 × 3/12)	150	
	Interest Payable	100	
	Cash		10,250
	Paid note and interest at maturity.		

A↓	=	L↓	+	E↓
Cash↓		Notes Payable↓ Interest Payable↓		Interest Expense↑

Current Portion of Long-term Notes Payable

Long-term notes payable are typically reported in the long-term liability section of the balance sheet. If, however, the long-term debt is paid in installments, the business will report the current portion of notes payable (also called *current maturity*) as a current liability. The **current portion of notes payable** is the principal amount that will be paid within one year of the balance sheet date. The remaining portion of the note will be classified as long-term.

Current Portion of Notes Payable
The amount of the principal that is payable within one year of the balance sheet date.

Let's consider a $20,000 note payable that is paid in $5,000 installments over four years. The portion that must be paid within one year, $5,000, is current. The remaining $15,000 will be classified as long-term. No journal entry is needed to reclassify the current portion. It is, instead, only classified as current or long-term for reporting purposes on the balance sheet. Notice that the reclassification does not change the total amount of debt. It only reclassifies $5,000 of the total debt from long-term to current.

Try It!

On August 10, Swanson Company recorded sales of merchandise inventory on account, $4,000. The sales were subject to sales tax of 4%. The company uses the perpetual inventory system. On September 30, Swanson paid $500 of sales tax to the state.

1. Journalize the transaction to record the sale on August 10. Ignore cost of goods sold.
2. Journalize the transaction to record the payment of sales tax to the state.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S11-1 through S11-5. MyAccountingLab

HOW DO COMPANIES ACCOUNT FOR AND RECORD PAYROLL?

Learning Objective 2
Calculate and journalize basic payroll transactions

Payroll, also called *employee compensation*, also creates liabilities for a business. For service organizations—such as CPA firms and travel agencies—payroll is *the* major expense. Labor cost is so important that most businesses develop a special payroll system.

There are numerous ways to label an employee's pay:

- *Salary* is pay stated at an annual, monthly, or weekly rate, such as $62,400 per year, $5,200 per month, or $1,200 per week.

- *Wages* are pay amounts stated at an hourly rate, such as \$15 per hour.
- *Commission* is pay stated as a percentage of a sale amount, such as a 5% commission on a sale. A realtor who earns 5% commission, for example, earns \$5,000 on a \$100,000 sale of real estate (\$100,000 × 5%).
- *Bonus* is pay over and above base salary (or wage or commission). A bonus is usually paid for exceptional performance—in a single amount after year-end.
- *Benefits* are extra compensation—items that are not paid directly to the employee. Benefits cover health, life, and disability insurance. The employer pays the insurance company, which then provides coverage for the employee. Another type of benefit, retirement, sets aside money for the employee for his or her future retirement.

Businesses pay employees at a base rate for a set period—called *straight time*. For additional hours—*overtime*—the employee may get a higher pay rate, depending on the job classification and wage and hour laws.

Assume Ryan Park was hired to work for Smart Touch Learning. His pay is as follows:

- Ryan earns wages of \$15 per hour for straight time (40 hours), so his weekly pay is \$600 (\$15 per hour × 40 hours).
- The company pays *time-and-a-half* for overtime. That rate is 150% (1.5 times) the straight-time pay rate. Thus, Ryan earns \$22.50 per hour of overtime (\$15.00 × 1.5).
- For working 42 hours during a week, he earns gross pay of \$645, computed as follows:

Straight-time pay for 40 hours	\$ 600
Overtime pay for 2 hours: 2 × \$22.50	45
Gross Pay	\$ 645

Gross Pay and Net (Take-Home) Pay

Gross Pay
The total amount of salary, wages, commissions, and any other employee compensation before taxes and other deductions.

Net Pay
Gross pay minus all deductions. The amount of compensation that the employee actually takes home.

Two pay amounts are important for accounting purposes. **Gross pay** is the total amount of salary, wages, commissions, and bonuses earned by the employee during a pay period before taxes or any other deductions. Gross pay is an expense to the employer. In the preceding example, Ryan Park's gross pay was \$645. **Net pay** is the amount the employee gets to keep. Net pay is also called *take-home pay*. Net pay equals gross pay minus all deductions such as income tax withheld. The employer either writes a paycheck to each employee for his or her take-home pay or directly deposits the employee's take-home pay into the employee's bank account.

Employee Payroll Withholding Deductions

The federal government, most states, and many municipalities require employers to deduct taxes from employee paychecks. Insurance companies and investment companies may also get some of the employee's gross pay. Amounts withheld from paychecks are called *withholding deductions*. Payroll withholding deductions are the difference between gross pay and take-home pay. These deductions are withheld from paychecks and sent directly to the government, to insurance companies, or to other entities. Payroll withholding deductions fall into two categories:

- *Required deductions*, such as employee federal and state income tax, Social Security tax, and other deductions required by federal, state, or local laws. For example, employees pay their income tax and Social Security tax through payroll deductions.
- *Optional deductions*, including insurance premiums, retirement plan contributions, charitable contributions, and other amounts that are withheld at the employee's request.

After being withheld, payroll deductions become the liability of the employer, who then pays the outside parties—taxes to the government and contributions to charitable organizations, for example.

Withholding for Employee Income Tax

U.S. law and some states, cities, and counties require companies to withhold income tax from employee paychecks. The income tax deducted from gross pay is called **income tax withholding**. The amount withheld depends on the employee's gross pay and on the number of *withholding allowances* he or she claims.

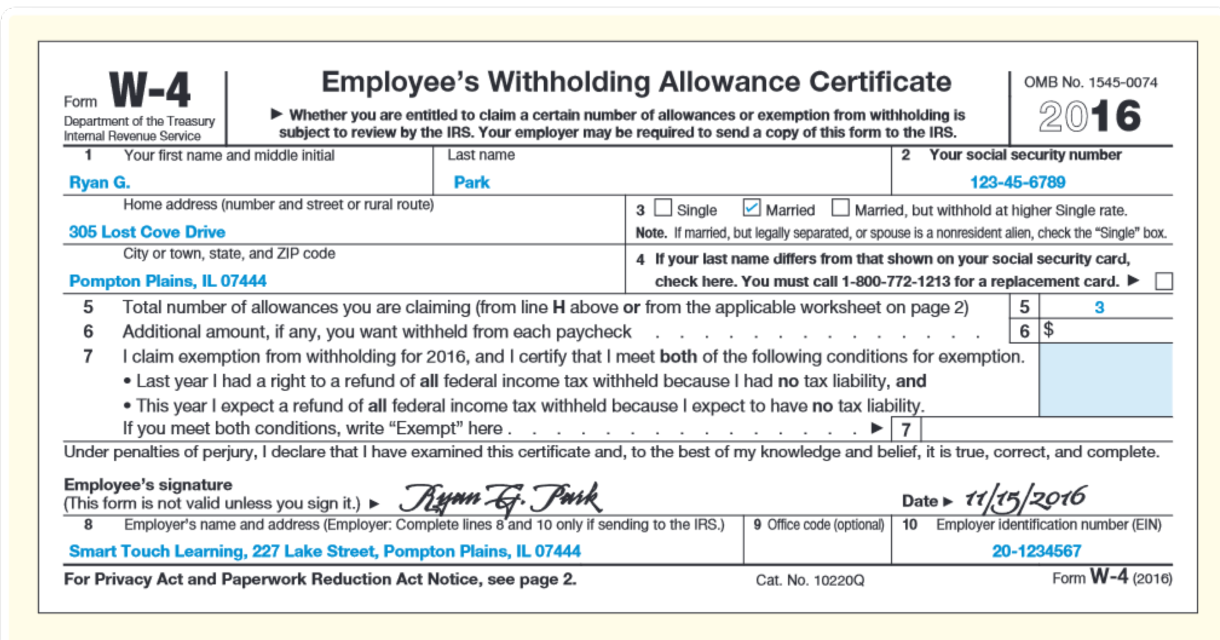
Income Tax Withholding
Income tax deducted from an employee's gross pay.

For federal tax withholdings, an employee files Form W-4 with his or her employer to indicate the number of allowances claimed for income tax withholding. Each allowance lowers the amount of tax withheld:

- An unmarried taxpayer usually claims one allowance.
- A childless married couple usually claims two allowances.
- A married couple with one child usually claims three allowances, and so on.

Exhibit 11-1 shows a W-4 for Ryan Park, who claims married with three allowances (lines 3 and 5).

Exhibit 11-1 | **W-4**


Form **W-4** Department of the Treasury Internal Revenue Service

Employee's Withholding Allowance Certificate

▶ Whether you are entitled to claim a certain number of allowances or exemption from withholding is subject to review by the IRS. Your employer may be required to send a copy of this form to the IRS.

OMB No. 1545-0074 **2016**

1 Your first name and middle initial: Ryan G. | Last name: Park | 2 Your social security number: 123-45-6789

Home address (number and street or rural route): 305 Lost Cove Drive

3 ☐ Single ☑ Married ☐ Married, but withhold at higher Single rate.
Note. If married, but legally separated, or spouse is a nonresident alien, check the "Single" box.

City or town, state, and ZIP code: Pompton Plains, IL 07444

4 If your last name differs from that shown on your social security card, check here. You must call 1-800-772-1213 for a replacement card. ▶ ☐

5 Total number of allowances you are claiming (from line **H** above **or** from the applicable worksheet on page 2) | 5 | 3

6 Additional amount, if any, you want withheld from each paycheck . . . . | 6 | $

7 I claim exemption from withholding for 2016, and I certify that I meet **both** of the following conditions for exemption.
• Last year I had a right to a refund of **all** federal income tax withheld because I had **no** tax liability, **and**
• This year I expect a refund of **all** federal income tax withheld because I expect to have **no** tax liability.
If you meet both conditions, write "Exempt" here . . . . ▶ | 7 |

Under penalties of perjury, I declare that I have examined this certificate and, to the best of my knowledge and belief, it is true, correct, and complete.

Employee's signature
(This form is not valid unless you sign it.) ▶ Ryan G. Park   **Date** ▶ 11/15/2016

8 Employer's name and address (Employer: Complete lines 8 and 10 only if sending to the IRS.): Smart Touch Learning, 227 Lake Street, Pompton Plains, IL 07444 | 9 Office code (optional) | 10 Employer identification number (EIN): 20-1234567

For Privacy Act and Paperwork Reduction Act Notice, see page 2. Cat. No. 10220Q Form **W-4** (2016)

Withholding for Employee Social Security Tax (FICA)

The **Federal Insurance Contributions Act (FICA)**, also known as the Social Security Act, created the Social Security tax. The Social Security program provides retirement, disability, and medical benefits. The law requires employers to withhold **Social Security (FICA) tax** from employees' paychecks. The FICA tax has two components:

1. OASDI (old age, survivors, and disability insurance)
2. Medicare (medical benefits)

Federal Insurance Contributions Act (FICA)
The federal act that created the Social Security tax that provides retirement, disability, and medical benefits.

Social Security (FICA) Tax
Federal Insurance Contributions Act (FICA) tax, which is withheld from employees' pay and matched by the employer.

OASDI provides retirement benefits to individuals based upon age, benefits to survivors of qualified individuals, and disability insurance to individuals who cannot work because of a medical condition. The amount of tax withheld varies from year to year because the wage base is subject to OASDI tax changes each year. For 2016, the OASDI tax applies to the first $118,500 of employee earnings in a year. The taxable amount of earnings is usually adjusted annually. The OASDI tax rate for employees at the time of this writing is 6.2%. Therefore, the maximum OASDI tax that an employee paid in 2016 was $7,347 ($118,500 × 0.062).

The Medicare portion of the FICA tax provides health insurance to individuals based on age or disability. Medicare applies to all employee earnings—that means there is no maximum tax. At the time of this writing, this tax rate is 1.45% for earnings up to $200,000. Earnings over $200,000 are taxed an additional 0.9%, for a total of 2.35%. Therefore, an employee pays a combined FICA tax rate of 7.65% (6.2% + 1.45%) of the first $118,500 of annual earnings, plus 1.45% of earnings above $118,500 up to $200,000, and 2.35% on earnings above $200,000.

The percentage used and the wage base for payroll withholdings and taxes vary from year to year. We are using amounts that are current at the time of printing. You should use these numbers when you complete this chapter's assignments.

Assume that James Kolen, another employee of Smart Touch Learning, earned $114,200 prior to December. Kolen's salary for December is $10,000. Kolen's FICA tax withheld from his paycheck is calculated as follows:

	OASDI	Medicare
Employee earnings subject to tax	$ 118,500	No Max
Employee earnings prior to the current month	− 114,200	
Current pay subject to tax	$ 4,300	$ 10,000
Tax rate	× 0.062	× 0.0145
Tax to be withheld from paycheck	$ 267*	$ 145
Total FICA tax withheld ($267 + $145)	$412	

*Numbers in examples are rounded to nearest dollar for simplicity. Payroll amounts are usually rounded to the nearest cent.

Why did James Kolen only pay OASDI tax on $4,300 of earnings?

Notice that only $4,300 of Kolen's $10,000 salary is subject to OASDI tax. This is because in December, Kolen reaches the maximum amount of earnings that is subject to OASDI. Once an employee has earned $118,500, no further earnings are taxed for OASDI in that year.

Medicare tax, on the other hand, has no maximum. All earnings are subject to the tax. Kolen pays Medicare tax on the entire $10,000 earned in December.

Optional Withholding Deductions

As a convenience to employees, some companies withhold payroll deductions and then pay designated organizations according to employee instructions. Insurance premiums, retirement savings, union dues, and gifts to charities are examples.

The table on the next page summarizes James Kolen's final pay period on December 31 assuming he authorized a $180 payment for health insurance and a $20 contribution to United Way. Employee income tax is assumed to be 20% of gross pay.

Gross pay		$ 10,000
Withholding deductions:		
Employee income tax (20%)	$ 2,000	
Employee OASDI tax (calculated on prior page)	267	
Employee Medicare tax (1.45%)	145	
Employee health insurance	180	
Employee contribution to United Way	20	
Total withholdings		2,612
Net (take-home) pay		$ 7,388

Payroll Register

Many companies use a **payroll register** to help summarize the earnings, withholdings, and net pay for each employee. Exhibit 11-2 shows the payroll register for Smart Touch Learning for the month of December.

Payroll Register
A schedule that summarizes the earnings, withholdings, and net pay for each employee.

Exhibit 11-2 | Payroll Register

Employee Name	Earnings			Withholdings						Net Pay	Check No.	Salaries and Wages Expense
	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	Other	Total Withholdings			
James Kolen	$ 114,200	$ 10,000	$ 124,200	$ 267	$ 145	$ 2,000	$ 180	$ 20	$ 2,612	$ 7,388	530	$ 10,000
Benito Munez	62,100	5,500	67,600	341	80	825	110	0	1,356	4,144	531	5,500
Ryan Park	37,400	2,580	39,980	160	37	465	110	0	772	1,808	532	2,580
Lisa Smart	0	4,000	4,000	248	58	1,400	65	0	1,771	2,229	533	4,000
Sharon Zapato	71,500	6,500	78,000	403	94	1,625	180	40	2,342	4,158	534	6,500
Total	$ 285,200	$ 28,580	$ 313,780	$ 1,419	$ 414	$ 6,315	$ 645	$ 60	$ 8,853	$ 19,727		$ 28,580

Don't confuse corporate income tax owed by the corporation, which creates Income Tax Payable, and personal income tax withheld from the employees' paychecks, which creates Employee Income Taxes Payable.

A business's payroll register typically includes the following columns:

1. Employee Name
2. Beginning cumulative earnings—the amount the employee has earned through the last pay period.
3. Current period earnings—earnings for the current period (includes regular and overtime earnings, commissions, and bonuses).
4. Ending cumulative earnings—beginning cumulative earnings plus current period earnings.
5. OASDI—6.2% tax on the first $118,500 earnings.
6. Medicare—1.45% tax on the first $200,000; 2.35% on earnings over $200,000.
7. Income Tax—includes federal, state, and any local government income tax withheld; varies depending on filing status and number of withholding allowances.
8. Health Insurance—withholdings made for employee-paid health care coverage.
9. Other—employees' voluntary withholdings such as charitable contributions and union dues.

10. Total Withholdings—total of all withholdings.
11. Net Pay—current period earnings less total withholdings. This is the amount that is paid to each employee.
12. Check No.—the check number used to make payment for earnings.
13. Salaries and Wages Expense—the amount debited to Salaries and Wages Expense for the current pay period.

Journalizing Employee Payroll

The information from the payroll register is used to record the payroll journal entry. Payroll and payroll withholdings are recorded as liabilities until the amounts are paid. The totals from the payroll register will be used to create the journal entry for Smart Touch Learning.

A	=	L↑	+	E↓
		Various Payables↑ Salaries and Wages Payable↑		Salaries and Wages Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries and Wages Expense	28,580	
	FICA—OASDI Taxes Payable		1,419
	FICA—Medicare Taxes Payable		414
	Employee Income Taxes Payable		6,315
	Employee Health Insurance Payable		645
	United Way Payable		60
	Salaries and Wages Payable		19,727
	To record salaries and wages expense and payroll withholdings.		

In the above journal entry, Salaries and Wages Expense ($28,580) represents the gross pay for all employees. Gross pay includes both the amount owed for salaries and wages ($19,727) and payroll withholdings ($1,419 + $414 + $6,315 + $645 + $60).

On payday, Smart Touch Learning will make payment of $19,727 to its employees and record the following journal entry:

A↓	=	L↓	+	E
Cash↓		Salaries and Wages Payable↓		

Date	Accounts and Explanation	Debit	Credit
Jan. 5	Salaries and Wages Payable	19,727	
	Cash		19,727
	To record payment of salaries.		

The other payable accounts, FICA, Income Taxes Payable, Health Insurance, and any charitable contributions, will be removed from the books when payments are made on those specific payables with debits to the liability accounts and a credit to Cash.

Employer Payroll Taxes

In addition to income tax and FICA tax, which are withheld from employee paychecks, *employers* must pay at least three payroll taxes. These taxes are not withheld from employees' gross earnings but instead are paid by the employer:

1. Employer FICA tax (OASDI and Medicare)
2. State unemployment compensation tax (SUTA)
3. Federal unemployment compensation tax (FUTA)

Employer FICA Tax

In addition to the FICA tax withheld from the employee's paycheck, the employer must also pay both OASDI and Medicare. The employer portion of OASDI is 6.2% on the first $118,500 of each employee's annual earnings. The employer's tax rate for Medicare is 1.45% on all earnings. (The employer does not pay the additional 0.9% Medicare tax on earnings above $200,000.) The Social Security system is funded by contributions from both the employer and employee.

State and Federal Unemployment Compensation Taxes

The Federal Unemployment Tax Act (FUTA) and the State Unemployment Tax Act (SUTA) finance workers' compensation for people laid off from work. These **unemployment compensation taxes** are paid by the employer; they are not deducted from employees' gross pay. (Some states require employees to contribute to SUTA. For our purposes, we will assume that unemployment compensation taxes are paid only by the employer.) In recent years, employers have paid a combined tax of 6.0% on the first $7,000 of each employee's annual earnings for unemployment tax. The proportion paid to the state depends on the individual state, but for many it is 5.4% to the state plus 0.6% to the federal government. For this payroll tax, the employer uses two liability accounts:

Unemployment Compensation Taxes
Payroll tax paid by employers to the government, which uses the cash to pay unemployment benefits to people who are out of work.

- Federal Unemployment Taxes Payable (FUTA Payable)
- State Unemployment Taxes Payable (SUTA Payable)

Exhibit 11-3 shows the distribution of payroll for an employee who earns $1,000, assuming the employee has not reached the payroll tax limits.

Exhibit 11-3 | Payroll Costs

Employee's taxes and other withholdings				Employer's taxes			
Net (Take-Home) Pay	OASDI (6.2% on first $118,500)	Medicare (1.45% on first $200,000, then 2.35%)	Income Tax (20% assumed)	OASDI (6.2% on first $118,500)	Medicare (1.45% on all earnings)	FUTA (0.6% on first $7,000)	SUTA (5.4% on first $7,000)
$723 +	$62 +	$15 +	$200	$62 +	$15 +	$6 +	$54
=$1,000				=$137			
Employer pays a total of $1,137.							

Journalizing Employer Payroll Taxes

Smart Touch Learning's employer payroll taxes for December will be calculated as follows:

	Earnings			Employer Payroll Taxes				
Employee Name	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI (6.2%)	Medicare (1.45%)	FUTA (0.6%)	SUTA (5.4%)	Total Taxes
James Kolen	$ 114,200	$ 10,000	$ 124,200	$ 267	$ 145	$ 0	$ 0	$ 412
Benito Munez	62,100	5,500	67,600	341	80	0	0	421
Ryan Park	37,400	2,580	39,980	160	37	0	0	197
Lisa Smart	0	4,000	4,000	248	58	24	216	546
Sharon Zapato	71,500	6,500	78,000	403	94	0	0	497
Total	$ 285,200	$ 28,580	$ 313,780	$ 1,419	$ 414	$ 24	$ 216	$ 2,073

As with employee contributions, the federal FICA—OASDI is determined as 6.2% on the first $118,500 earned by each employee. Smart Touch Learning must pay OASDI tax on all employees; however, the amount paid on James Kolen's earnings is limited to the first $118,500 [($118,500 − $114,200) × 6.2% = $267]. FICA—Medicare applies to all earnings at a rate of 1.45%.

FUTA (0.6%) and SUTA (5.4%) tax is only paid on the first $7,000 of each employee's earnings. Smart Touch Learning will only pay unemployment taxes on Lisa Smart because all other employees have earned more than $7,000 prior to the December pay period.

Smart Touch Learning records the employer's payroll tax expense as a debit to Payroll Tax Expense and a credit to the various payable accounts:

A	=	L↑	+	E↓
		Various Payables↑		Payroll Tax Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Payroll Tax Expense	2,073	
	FICA—OASDI Taxes Payable		1,419
	FICA—Medicare Taxes Payable		414
	Federal Unemployment Taxes Payable		24
	State Unemployment Taxes Payable		216
	To record employer's payroll tax expense.		

Payment of Employer Payroll Taxes and Employees' Withholdings

On payday, or shortly thereafter, Smart Touch Learning will make payments to the various government agencies and other designated organizations for the employees' withholdings and Smart Touch Learning's tax obligations. The information for the payment comes from the journal entries to record employee payroll and employer payroll taxes. Notice that FICA—OASDI Taxes Payable and FICA—Medicare Taxes Payable are included in the journal entry to record employee payroll and the journal entry to record employer payroll taxes. That is because the FICA taxes are obligations of both the employee and the employer. Smart Touch Learning will combine those amounts when recording the payments. Assuming the payments are made on January 15, the journal entry is:

A↓	=	L↓	+	E
Cash↓		Various Payables↓		

Date	Accounts and Explanation	Debit	Credit
Jan. 15	FICA—OASDI Taxes Payable ($1,419 + $1,419)	2,838	
	FICA—Medicare Taxes Payable ($414 + $414)	828	
	Employee Income Taxes Payable	6,315	
	Employee Health Insurance Payable	645	
	United Way Payable	60	
	Federal Unemployment Taxes Payable	24	
	State Unemployment Taxes Payable	216	
	Cash		10,926
	To record payment of payroll liabilities.		

Internal Control Over Payroll

There are two main controls for payroll:

- Controls for efficiency
- Controls to safeguard payroll disbursements

Controls for Efficiency

Payroll transactions are ideal for computer processing. The payroll data are stored in a file, and the computer makes the calculations, prints paychecks, and updates all records electronically. In addition, companies may require direct deposits for employees' pay so that paper checks do not have to be written to each employee. Direct deposits also increase efficiency by reducing the amount of reconciling needed on outstanding checks.

Controls to Safeguard Payroll Disbursements

A controller of a small business can monitor his or her payroll by personal contact with employees. Large companies cannot. A particular risk is that a paycheck may be written to a fictitious person and cashed by a dishonest employee. To guard against this, large businesses adopt strict internal controls for payroll.

Hiring and firing employees should be separated from accounting and from passing out paychecks. Photo IDs ensure that only actual employees are paid. Employees clock in at the start and clock out at the end of the workday to prove their attendance and hours worked.

The foundation of internal control is the separation of duties. This is why all but the smallest companies have separate departments for the following activities:

- The Human Resources Department hires and fires workers.
- The Payroll Department maintains employee earnings records.
- The Accounting Department records all transactions.
- The Treasurer distributes paychecks to employees.

Try It!

3. Theodore Simpson works for Blair Company all year and earns a monthly salary of $4,000. There is no overtime pay. Based on Theodore's W-4, Blair withholds income taxes at 15% of his gross pay. As of July 31, Theodore had $28,000 of cumulative earnings.

Journalize the accrual of salary expense for Blair Company related to the employment of Theodore Simpson for the month of August.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S11-6 through S11-8. MyAccountingLab

HOW ARE CURRENT LIABILITIES THAT MUST BE ESTIMATED ACCOUNTED FOR?

Learning Objective 3
Account for current liabilities that must be estimated

A business may know that a liability exists but not know the exact amount. The business cannot simply ignore the liability. It must estimate the amount of the liability and report it on the balance sheet. Common examples of liabilities that are often estimated are bonus plans, vacation pay, health and pension benefits, and warranties.

Bonus Plans

Many companies give bonuses to their employees in addition to their regular wages. These bonuses are often based on meeting a specific goal, such as the employee meeting an expected sales goal or the business achieving a target profit. Usually a company does not know the amount of the year-end bonus at year-end; the company instead estimates the amount of the bonus based on a set percentage. For example, assume Smart Touch

Learning estimates that it will pay a 5% bonus on annual net income after deducting the bonus. Assume the company reports net income of $315,000 before the calculation of the bonus. The accounting department will calculate the bonus as follows:

$$\begin{aligned} \text{Bonus} &= (\text{Bonus \%} \times \text{Net income before bonus}) / (1 + \text{Bonus \%}) \\ &= (0.05 \times \$315{,}000) / (1 + 0.05) \\ &= \$15{,}000 \end{aligned}$$

This formula allows you to back into the bonus amount. For example, net income minus the bonus is $300,000 ($315,000 – $15,000). The bonus of $15,000 is really 5% of net income after the bonus has been subtracted ($300,000 × 0.05= $15,000).

Assuming Smart Touch Learning will not make payment until the next year, it must record a liability for the bonus due to its employees. The accounting clerk will record the following entry:

A = L↑ + E↓
Employee Bonus Payable↑ | Employee Bonus Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Employee Bonus Expense	15,000	
	Employee Bonus Payable		15,000
	To record employee bonus expense.		

When Smart Touch Learning makes payment, it will debit Employee Bonus Payable and credit Cash.

Vacation, Health, and Pension Benefits

Pension Plan
A plan that provides benefits to retired employees.

Businesses typically offer vacation, health, and pension benefits to its employees. A **pension plan** provides benefits to retired employees. Vacation, health, and pension benefits must be estimated and recorded as a liability. Suppose Smart Touch Learning employees earn two weeks of vacation throughout the year. The company estimates that the cost of providing vacation benefits is $1,000 per month. The accounting clerk will record the following journal entry monthly:

A = L↑ + E↓
Vacation Benefits Payable↑ | Vacation Benefits Expense↑

Date	Accounts and Explanation	Debit	Credit
	Vacation Benefits Expense	1,000	
	Vacation Benefits Payable		1,000
	To record employee vacation benefits expense.		

When an employee takes paid vacation, Smart Touch Learning will reduce the liability, Vacation Benefits Payable, with a debit and credit Cash. Other benefits, such as health and pension benefits, are recorded in the same manner.

Warranties

Warranty
An agreement that guarantees a company's product against defects.

Many corporations guarantee their products against defects under **warranty** agreements. The time period of warranty agreements varies. The matching principle requires businesses to record Warranty Expense in the same period that the company records the revenue related to that warranty. The expense, therefore, is incurred when the

company makes a sale, not when the company pays the warranty claims. At the time of the sale, the company does not know the exact amount of warranty expense but can estimate it.

Assume that Smart Touch Learning made sales on account of $50,000 (cost of merchandise inventory sold, $35,000) subject to product warranties on June 10 and estimates that warranty costs will be 3% of sales. The company would record the sales revenue, cost of goods sold, and estimated warranty expense as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 10	Accounts Receivable	50,000	
	Sales Revenue		50,000
	Recorded sale on account.		
10	Cost of Goods Sold	35,000	
	Merchandise Inventory		35,000
	Recorded the cost of goods sold.		
10	Warranty Expense ($50,000 × 0.03)	1,500	
	Estimated Warranty Payable		1,500
	To accrue warranty payable.		

A↑	=	L	+	E↑
Accounts Receivable↑				Sales Revenue↑

A↓	=	L	+	E↓
Merchandise Inventory↓				Cost of Goods Sold↑

A	=	L↑	+	E↓
		Estimated Warranty Payable↑		Warranty Expense↑

Assume that some of Smart Touch Learning's customers make claims that must be honored through the warranty offered by the company. The warranty costs total $800 and are made on June 27. The company replaces the defective goods and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
Jun. 27	Estimated Warranty Payable	800	
	Merchandise Inventory		800
	To replace merchandise inventory under warranty.		

A↓	=	L↓	+	E
Merchandise Inventory↓		Estimated Warranty Payable↓		

Smart Touch Learning replaced the defective goods, so the credit was to Merchandise Inventory. If the company had given the customer a refund instead of a replacement, the credit would be to Cash.

Smart Touch Learning's expense on the income statement is $1,500, the estimated amount, not the $800 actually honored. After honoring these warranties, the company's liability account has a credit balance of $700. This $700 balance represents warranty claims Smart Touch Learning expects to honor in the future based on its estimates; therefore, the $700 is a liability to Smart Touch Learning.

Estimated Warranty Payable

Jun. 27	800	1,500	Jun. 10
		700	Bal.

TYING IT ALL TOGETHER

UnitedHealth Group Incorporated is a health and well-being company dedicated to helping people live healthier lives. The company provides products and services under two distinct brands: UnitedHealthcare and Optum. UnitedHealthcare provides health care coverage and benefits for more than 30 million people. Optum provides information and technology-enabled health services. The company currently employs more than 200,000 individuals. (You can find UnitedHealth Group Incorporated's annual report at http://www.unitedhealthgroup.com/~/media/UHG/PDF/2015/UNH-Q4-2015-Form-10-K.ashx?la=en.)

On the UnitedHealth Group Incorporated's balance sheet, the company lists several different types of current liabilities including medical costs payable. What does medical costs payable represent?

In the notes to the financial statements, UnitedHealth Group states medical costs payable include the company's obligations for medical care services that have been provided to insured consumers but that have not yet been paid. In addition, medical costs payable also includes physician, hospital, and other medical costs disputes.

How does UnitedHealth Group Incorporated estimate the amount of medical costs payable that is recorded on its balance sheet?

UnitedHealth Group estimates the amount of medical costs payable based on factors such as time from date of service to claim receipt, claim backlogs, and other medical cost trends. The estimated costs associated with medical disputes are based on an analysis of potential outcomes. The estimates are re-evaluated frequently and adjustments are made as needed.

Try It!

4. O'Conner guarantees its vacuums for four years. Prior experience indicates that warranty costs will be approximately 6% of sales. Assume that O'Conner made sales totaling $200,000 during 2018. Record the warranty expense for the year.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S11-9 through S11-11. MyAccountingLab

HOW ARE CONTINGENT LIABILITIES ACCOUNTED FOR?

Learning Objective 4
Account for contingent liabilities

Contingent Liability
A potential liability that depends on some future event.

A **contingent liability** is a potential, rather than an actual, liability because it depends on a *future* event. For a contingent liability to be paid, some event (the contingency) must happen in the future. For example, suppose Smart Touch Learning is sued because of alleged patent infringement on one of its online learning videos. The company, therefore, faces a contingent liability, which may or may not become an actual liability. If the outcome of this lawsuit is unfavorable, it could hurt Smart Touch Learning by increasing its liabilities. Therefore, it would be unethical to withhold knowledge of the lawsuit from investors and creditors.

Another contingent liability arises when a company *co-signs a note payable* for another entity. The company co-signing has a contingent liability until the note comes due and is paid by the other entity. If the other company pays off the note, the contingent liability vanishes. If the other company doesn't pay off the note, the co-signing company must pay the debt for the other entity. How businesses record or don't record contingent liabilities is based on one of three likelihoods of the event occurring in the future:

- Remote
- Reasonably possible
- Probable

Remote Contingent Liability

A contingency that is remote has little chance of the event occurring in the future. If a contingency is remote, the company does not need to record a liability and does not need to disclose it in the notes to the financial statements. An example of a remote contingency would be a frivolous lawsuit.

Reasonably Possible Contingent Liability

Contingencies that are reasonably possible have a greater chance of occurring but are not likely. A reasonably possible contingency should be described in the notes to the financial statements. For example, consider a company that is the defendant in a significant lawsuit. If the company has been advised by legal counsel that it is reasonably possible that it will lose the lawsuit, then it should report the lawsuit in its notes to the financial statements.

Under IFRS, "probable" is defined more broadly as "more likely than not" that the future event will result in a liability. "More likely than not" means more than a 50% chance.

Probable Contingent Liability

If a contingency is probable, it means that the future event is likely to occur. Only contingencies that are probable *and* can be estimated are recorded as a liability and an expense is accrued. An example of an estimable probable contingency is a warranty.

Contingencies that are probable but *cannot* be estimated are disclosed in the notes to the financial statements. A liability is not recorded because the amount of the contingency cannot be estimated. Exhibit 11-4 summarizes the rules for contingent liabilities.

Exhibit 11-4 | Contingent Liabilities

Likelihood of Future Event	How to Report the Contingency
Remote	Do not disclose.
Reasonably possible	Describe the situation in a note to the financial statements.
Probable and the amount of the expense or loss *cannot* be estimated	Describe the situation in a note to the financial statements.
Probable and the amount of the expense or loss *can* be estimated	Record an expense or loss and a liability based on estimated amounts.

DECISIONS

How should the contingency be reported?

Emily Gallagher is the independent auditor of Tate Manufacturing, a maker of handheld drills and other carpentry tools. Emily is evaluating current lawsuits for the company to determine whether any contingent liabilities should be disclosed. Tate Manufacturing is currently in litigation for a product liability case. The suit claims that a Tate handheld drill heated up quickly and caused a fire. Tate's attorney has told Emily that it is likely that the manufacturer will lose the case, but he does not want to estimate the amount of damages. The attorney is concerned that estimating the amount of damages would establish a dollar amount for settlement and could place their case in jeopardy. What should Emily do?

Solution

GAAP requires that businesses report a contingency if it is probable that the event will occur in the future. The issue here is where the reporting should be made. If the attorney cannot reasonably estimate the amount of the possible damage award, Tate should report the contingent liability in the notes to the financial statements. If an amount can be determined, Tate Manufacturing should record an expense or loss, and a liability based on the estimated amount. Emily should determine whether the attorney *can* estimate the damages but just doesn't want to. If the damages can be estimated, Emily should require that the company record a contingent liability.

Alternative Solution

The attorney's concern is understandable. He feels that disclosing the amount of the contingent liability could hurt the determination of the case. If the jury were to find out about the disclosure, it might be more likely to award damages to the plaintiff, or the plaintiff might be able to negotiate a larger settlement with Tate. The attorney has a right to be concerned about the transparency of the financial reporting and potential damage to the outcome of the case. The attorney should provide an estimate only if he is reasonably confident with the amount of damages.

Try It!

Match the likelihood of a future event with the reporting of the contingency. An answer may be selected more than once.

Likelihood of Future Event	How to Report the Contingency
5. Remote	**a.** Do not disclose.
6. Reasonably possible	**b.** Record an expense and a liability based on estimated amounts.
7. Probable and the amount of the loss *cannot* be estimated	**c.** Describe the situation in a note to the financial statements.
8. Probable and the amount of the loss *can* be estimated	

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S11-12. MyAccountingLab

HOW DO WE USE THE TIMES-INTEREST-EARNED RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5
Use the times-interest-earned ratio to evaluate business performance

Times-Interest-Earned Ratio
Evaluates a business's ability to pay interest expense. (Net income + Income tax expense + Interest expense) / Interest expense.

Investors can use the **times-interest-earned ratio** to evaluate a business's ability to pay interest expense. This ratio measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense. The times-interest-earned ratio is also called the *interest-coverage ratio*. A high interest-coverage ratio indicates a business's ease in paying interest expense; a low ratio suggests difficulty. The times-interest-earned ratio is calculated as EBIT (Net income + Income tax expense + Interest expense) divided by Interest expense.

Let's evaluate **Kohl's Corporation's** ability to pay its interest expense. The following amounts (in millions) are taken from Kohl's income statement.

	Year Ended January 30, 2016	Year Ended January 31, 2015
Net income	$ 673	$ 867
Income tax expense	384	482
Interest expense	327	340

Kohl's times-interest-earned ratios for the years ended January 30, 2016 (2015 fiscal year), and January 31, 2015 (2014 fiscal year), are calculated as follows:

Times-interest-earned ratio = (Net income + Income tax expense + Interest expense) / Interest expense

2015

= ($673 + $384 + $327) / $327
= 4.23 (rounded)

2014

= ($867 + $482 + $340) / $340
= 4.97 (rounded)

Notice that from 2014 to 2015, Kohl's experienced a decrease in its times-interest-earned ratio. This is because Kohl's incurred slightly less interest expense but had a much larger decrease in net income to cover it. This decrease in net income decreases Kohl's times-interest-earned ratio from 4.97 times to 4.23 times. However, it would appear that Kohl's can still cover its interest expense.

Try It!

9. Fitzgerald Company reported the following amounts on its 2018 income statement:

	Year Ended December 31, 2018
Net income	$ 19,300
Income tax expense	5,800
Interest expense	900

What is Fitzgerald's times-interest-earned ratio for 2018? (Round your answer to two decimals.)

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S11-13. MyAccountingLab

REVIEW

> Things You Should Know

1. How are current liabilities of known amounts accounted for?

- Current liabilities are liabilities that must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.
- Some examples of current liabilities are accounts payable, sales tax payable, income tax payable, unearned revenues, and short-term notes payable.
- Current liabilities also include any current portion of long-term notes payable.

2. How do companies account for and record payroll?

- Gross pay is the total amount of salary or wages earned by the employee. Net pay is the amount that each employee gets to keep (take-home pay).
- Payroll withholding deductions are the difference between gross pay and net pay. Examples of payroll deductions that *employees* pay include:
  - Income tax withholding: federal, state, and local income tax
  - Employee FICA tax (at time of printing):
    - OASDI: 6.2% on the first $118,500 of annual earnings
    - Medicare: 1.45% on earnings up to $200,000, 2.35% on all earnings above $200,000
  - Optional withholdings: charitable contributions, union dues, and so on
- A payroll register can be used to help summarize the earnings, withholdings, and net pay for each employee.

- Businesses record a journal entry for payroll and payroll withholdings as a debit to Salaries and Wages Expense and a credit to various liabilities until the amounts are paid.
- *Employers* must pay at least three payroll taxes:
  - Employer FICA tax (at time of printing):
    - OASDI: 6.2% on the first $118,500 of each employee's annual earnings
    - Medicare: 1.45% on all earnings
  - State unemployment compensation tax (SUTA): varies by state; we will use 5.4% on the first $7,000 of each employee's annual earnings
  - Federal unemployment compensation tax (FUTA): 0.6% on the first $7,000 of each employee's annual earnings
- Payroll taxes are recorded as a debit to Payroll Tax Expense and a credit to various liabilities until they are paid.
- Internal control over payroll involves efficiency and safeguarding of payroll disbursements.

3. How are current liabilities that must be estimated accounted for?

- Bonuses are based on meeting a specific goal and are considered liabilities (Employee Bonus Payable) until paid.
- Vacation, health, and pension benefits must be estimated and recorded as liabilities until paid.
- Warranty Expense (DR) and Estimated Warranty Payable (CR) must be recorded in the same period that the company records the revenue related to the warranty.
- As warranties are honored, the Estimated Warranty Payable account is reduced.

4. How are contingent liabilities accounted for?

- A contingent liability is a potential liability that depends on some future event.
- Accounting for contingent liabilities is based on the following likelihoods:
  - Remote: Do not disclose.
  - Reasonably possible: Describe the situation in a note to the financial statements.
  - Probable and the amount of the expense or loss *cannot* be estimated: Describe the situation in a note to the financial statements.
  - Probable and the amount of the expense or loss *can* be estimated: Record an expense or loss and a liability based on estimated amounts.

5. How do we use the times-interest-earned ratio to evaluate business performance?

- The times-interest-earned ratio is calculated as (Net income + Income tax expense + Interest expense) / Interest expense.
- It measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense.

> Check Your Understanding 11-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Answer each question independently.

Requirements

1. A restaurant made cash sales of $4,000 subject to a 5% sales tax. Record the sales and the related sales tax. Also record the payment of the tax to the state. (See Learning Objective 1)
2. On October 1, 2018, Rhodes Company purchased equipment at a cost of $10,000, signing a nine-month, 8% note payable for that amount. Record the October 1 purchase. Also record the adjusting entry needed on December 31, 2018, and payment of the note plus interest at maturity on July 1, 2019. (See Learning Objective 1)
3. How does a contingent liability differ from a known liability? When would a contingent liability be journalized? (See Learning Objective 4)

> Solution

Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Cash	4,200	
	Sales Revenue		4,000
	Sales Tax Payable ($4,000 × 0.05)		200
	To record cash sales and the related sales tax.		
	Sales Tax Payable	200	
	Cash		200
	To record cash payment for sales tax payable.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Oct. 1	Equipment	10,000	
	Notes Payable		10,000
	Purchased equipment in exchange for nine-month, 8% note.		
Dec. 31	Interest Expense ($10,000 × 0.08 × 3/12)	200	
	Interest Payable		200
	Accrued interest expense at year-end.		
2019			
Jul. 1	Notes Payable	10,000	
	Interest Expense ($10,000 × 0.08 × 6/12)	400	
	Interest Payable	200	
	Cash		10,600
	Paid note and interest at maturity.		

CHAPTER 11

Requirement 3

A contingent liability is a *potential*, rather than an actual, liability because it depends on a future event. Some event must happen (the contingency) for a contingent liability to have to be paid. Contingent liabilities are journalized when the likelihood of an actual loss is *probable* and the amount of the expense can be reasonably estimated.

> Check Your Understanding 11-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Rags-to-Riches, a clothing resale store, employs one salesperson, Dee Hunter. Hunter's straight-time wage is $10 per hour, with time-and-a-half pay for hours above 40. Rags-to-Riches withholds income tax (20%), FICA—OASDI (6.2%), and FICA—Medicare (1.45%) from Hunter's pay. Rags-to-Riches also pays payroll taxes for FICA—OASDI (6.2%), FICA—Medicare (1.45%), and state and federal unemployment (5.4% and 0.6%, respectively).

During the week ended December 26, Hunter worked 50 hours. Prior to this week, she had earned $2,000.

Requirements

(Round all amounts to the nearest dollar.)

1. Compute Hunter's gross pay and net (take-home) pay for the week. (See Learning Objective 2)
2. Record the payroll entries that Rags-to-Riches would make for each of the following (See Learning Objective 2):
   - **a.** Accrual of salaries and wages expense and subsequent payment related to Hunter
   - **b.** Employer payroll taxes accrual related to Hunter
   - **c.** Payment of all payroll taxes (employee and employer related)
3. How much was Rags-to-Riches's total payroll expense for the week? (See Learning Objective 2)

> Solution

Requirement 1

Gross pay:		
Straight-time pay (40 hours × $10/hour)		$ 400
Overtime pay:		
Rate per hour ($10 × 1.5)	$ 15	
Hours (50 hours − 40 hours)	× 10	
		150
Gross pay		$ 550
Net pay:		
Gross pay		$ 550
Withholding deductions:		
Employee income tax ($550 × 0.20)	$ 110	
Employee OASDI ($550 × 0.062)	34	
Employee Medicare ($550 × 0.0145)	8	
Total withholdings		152
Net (take-home) pay		$ 398

Requirement 2

Date	Accounts and Explanation	Debit	Credit
a.	Salaries and Wages Expense	550	
	FICA—OASDI Taxes Payable		34
	FICA—Medicare Taxes Payable		8
	Employee Income Taxes Payable		110
	Salaries and Wages Payable		398
	To record salaries and wages expense and payroll withholdings.		
	Salaries and Wages Payable	398	
	Cash		398
	To record payment of salaries and wages.		
b.	Payroll Tax Expense	75	
	FICA—OASDI Taxes Payable ($550 × 0.062)		34
	FICA—Medicare Taxes Payable ($550 × 0.0145)		8
	Federal Unemployment Taxes Payable ($550 × 0.006)		3
	State Unemployment Taxes Payable ($550 × 0.054)		30
	To record employer's payroll tax expense.		
c.	FICA—OASDI Taxes Payable ($34 + $34)	68	
	FICA—Medicare Taxes Payable ($8 + $8)	16	
	Employee Income Taxes Payable	110	
	Federal Unemployment Taxes Payable	3	
	State Unemployment Taxes Payable	30	
	Cash		227
	To record payment of payroll tax liabilities.		

Requirement 3

Rags-to-Riches incurred *total payroll expense* of $625 (gross pay of $550 + payroll tax expense of $75).

> Key Terms

Contingent Liability (p. 594)
Current Liability (p. 579)
Current Portion of Notes Payable (p. 583)
Federal Insurance Contributions Act (FICA) (p. 585)
Gross Pay (p. 584)
Income Tax Withholding (p. 585)
Liabilities (p. 579)
Long-term Liability (p. 579)
Net Pay (p. 584)
Payroll Register (p. 587)
Pension Plan (p. 592)
Short-term Note Payable (p. 581)
Social Security (FICA) Tax (p. 585)
Times-Interest-Earned Ratio (p. 596)
Unemployment Compensation Taxes (p. 589)
Warranty (p. 592)

> Quick Check

Learning Objective 1

1. On January 1, 2018, a business borrowed $18,000 on a five-year, 5% note payable. At December 31, 2018, the business should record
   a. interest payable of $900.
   b. note receivable of $18,000.
   c. cash payment of $18,000.
   d. nothing. (The note is already on the books.)

Learning Objective 1

2. A company sells $180,000 (sales price) of goods and collects sales tax of 8%. What current liability does the sale create?
   a. Sales tax payable of $14,400
   b. Sales revenue of $194,400
   c. Unearned revenue of $14,400
   d. None; the company collected cash up front.

Learning Objective 1

3. Jade Larson Antiques owes $20,000 on a truck purchased for use in the business. Assume the company makes timely principal payments of $5,000 each year at December 31 plus interest at 8%. Which of the following is true?
   a. After the first payment is made, the company owes $15,000 plus three years' interest.
   b. After the first payment, $15,000 would be shown as a long-term liability.
   c. After the first payment is made, $5,000 would be shown as the current portion due on the long-term note.
   d. Just before the last payment is made, $5,000 will appear as a long-term liability on the balance sheet.

Learning Objective 2

4. An employee has year-to-date earnings of $115,400. The employee's gross pay for the next pay period is $5,000. If the FICA—OASDI is 6.2% and the wage base is $118,500, how much FICA—OASDI tax will be withheld from the employee's pay? (Answer is rounded to whole dollar.)
   a. $192 **b.** $210 **c.** $310 **d.** $73

Learning Objective 2

5. The employer is responsible for which of the following payroll taxes?
   a. 6.2% FICA—OASDI tax
   b. 1.45% FICA—Medicare tax
   c. Federal and state unemployment taxes
   d. All of the above

Learning Objective 3

6. Known liabilities of estimated amounts are
   a. ignored. (Record them when paid.)
   b. reported on the balance sheet.
   c. reported on the income statement.
   d. reported only in the notes to the financial statements.

Learning Objective 3

7. Wells Electric (WE) owed Estimated Warranty Payable of $1,200 at the end of 2017. During 2018, WE made sales of $120,000 and expects product warranties to cost the company 3% of the sales. During 2018, WE paid $2,300 for warranties. What is WE's Estimated Warranty Payable at the end of 2018?
   a. $2,300 **b.** $2,500 **c.** $3,600 **d.** $4,800

Learning Objective 3

8. Vega Company expects to pay a 4% bonus on net income after deducting the bonus. Assume the company reports net income of $130,000 before the calculation of the bonus. The journal entry to record the accrued bonus includes
   a. a debit to Employee Bonus Payable, $5,000.
   b. a debit to Employee Bonus Expense, $5,200.
   c. a credit to Employee Bonus Payable, $5,000.
   d. a credit to Cash, $5,200.

Learning Objective 4

9. Swell Company has a lawsuit pending from a customer claiming damages of $100,000. Swell's attorney advises that the likelihood the customer will win is remote. GAAP requires at a minimum that this contingent liability be
   a. disclosed in the footnotes.
   b. disclosed in the footnotes, with ranges of potential loss.
   c. recorded as a journal entry, as well as disclosed in the footnotes.
   d. No disclosure is required.

Learning Objective 5

10. McDaniel and Associates reported the following amounts on its 2018 income statement:

	Year Ended December 31, 2018
Net income	$ 60,500
Income tax expense	12,100
Interest expense	5,000

What was McDaniel's times-interest-earned ratio for 2018?

a. 12.10 **b.** 15.52 **c.** 13.10 **d.** 14.52

Check your answers at the end of the chapter.

CHAPTER 11

ASSESS YOUR PROGRESS

> Review Questions

1. What are the three main characteristics of liabilities?
2. What is a current liability? Provide some examples of current liabilities.
3. How is sales tax recorded? Is it considered an expense of a business? Why or why not?
4. How do unearned revenues arise?
5. What do short-term notes payable represent?
6. Coltrane Company has a $5,000 note payable that is paid in $1,000 installments over five years. How would the portion that must be paid within the next year be reported on the balance sheet?
7. What is the difference between gross pay and net pay?
8. List the required employee payroll withholding deductions, and provide the tax rate for each.

9. How might a business use a payroll register?
10. What payroll taxes is the employer responsible for paying?
11. What are the two main controls for payroll? Provide an example of each.
12. When do businesses record warranty expense, and why?
13. What is a contingent liability? Provide some examples of contingencies.
14. Curtis Company is facing a potential lawsuit. Curtis's lawyers think that it is reasonably possible that it will lose the lawsuit. How should Curtis report this lawsuit?
15. How is the times-interest-earned ratio calculated, and what does it evaluate?

> Short Exercises

For all payroll calculations, use the following tax rates and round amounts to the nearest cent.

Employee: OASDI: 6.2% on first $118,500 earned; Medicare: 1.45% up to $200,000, 2.35% on earnings above $200,000.

Employer: OASDI: 6.2% on first $118,500 earned; Medicare: 1.45%; FUTA: 0.6% on first $7,000 earned; SUTA: 5.4% on first $7,000 earned.

Learning Objective 1

S11-1 Determining current versus long-term liabilities

Rios Raft Company had the following liabilities.

a. Accounts Payable
b. Note Payable due in 3 years
c. Salaries Payable
d. Note Payable due in 6 months
e. Sales Tax Payable
f. Unearned Revenue due in 8 months
g. Income Tax Payable

Determine whether each liability would be considered a current liability (CL) or a long-term liability (LTL).

Learning Objective 1

S11-2 Recording sales tax

On July 5, Williams Company recorded sales of merchandise inventory on account, $55,000. The sales were subject to sales tax of 4%. On August 15, Williams Company paid the sales tax owed to the state from the July 5 transaction.

Requirements

1. Journalize the transaction to record the sale on July 5. Ignore cost of goods sold.
2. Journalize the transaction to record the payment of sales tax to the state on August 15.

Learning Objective 1

S11-3 Recording unearned revenue

On June 1, *Hunting Man Magazine* collected cash of $63,000 on future annual subscriptions starting on July 1.

Requirements

1. Journalize the transaction to record the collection of cash on June 1.
2. Journalize the transaction required at December 31, the magazine's year-end, assuming no revenue earned has been recorded. (Round adjustment to the nearest whole dollar.)

S11-4 Accounting for a note payable — Learning Objective 1

On December 31, 2017, Franklin purchased $13,000 of merchandise inventory on a one-year, 9% note payable. Franklin uses a perpetual inventory system.

Requirements

1. Journalize the company's purchase of merchandise inventory on December 31, 2017.
2. Journalize the company's accrual of interest expense on June 30, 2018, its fiscal year-end.
3. Journalize the company's payment of the note plus interest on December 31, 2018.

S11-5 Determining current portion of long-term note payable — Learning Objective 1

On January 1, Irving Company purchased equipment of $280,000 with a long-term note payable. The debt is payable in annual installments of $56,000 due on December 31 of each year. At the date of purchase, how will Irving Company report the note payable?

S11-6 Computing and journalizing an employee's total pay — Learning Objective 2

Lucy Rose works at College of Fort Worth and is paid $12 per hour for a 40-hour workweek and time-and-a-half for hours above 40.

Requirements

1. Compute Rose's gross pay for working 60 hours during the first week of February.
2. Rose is single, and her income tax withholding is 15% of total pay. Rose's only payroll deductions are payroll taxes. Compute Rose's net (take-home) pay for the week. Assume Rose's earnings to date are less than the OASDI limit.
3. Journalize the accrual of wages expense and the payment related to the employment of Lucy Rose.

S11-7 Computing payroll amounts considering FICA tax limits — Learning Objective 2

Lily Carter works for JDK all year and earns a monthly salary of $12,100. There is no overtime pay. Lily's income tax withholding rate is 10% of gross pay. In addition to payroll taxes, Lily elects to contribute 5% monthly to United Way. JDK also deducts $250 monthly for co-payment of the health insurance premium. As of September 30, Lily had $108,900 of cumulative earnings.

Requirements

1. Compute Lily's net pay for October.
2. Journalize the accrual of salaries expense and the payment related to the employment of Lily Carter.

S11-8 Computing and journalizing the payroll expense and payments — Learning Objective 2

Macintosh Company has monthly salaries of $26,000. Assume Macintosh pays all the standard payroll taxes, no employees have reached the payroll tax limits, total income tax withheld is $2,000, and the only payroll deductions are payroll taxes. Journalize the accrual of salaries expense, accrual of employer payroll taxes, and payment of employee and employer payroll taxes for Macintosh Company.

S11-9 Computing bonus payable — Learning Objective 3

On December 31, Weston Company estimates that it will pay its employees a 5% bonus on net income after deducting the bonus. The company reports net income of $64,000 before the calculation of the bonus. The bonus will be paid on January 15 of the next year.

Requirements

1. Journalize the December 31 transaction for Weston.
2. Journalize the payment of the bonus on January 15.

Learning Objective 3

S11-10 Journalizing vacation benefits

Samuel Industries has three employees. Each employee earns two vacation days a month. Samuel pays each employee a weekly salary of $1,250 for a five-day workweek.

Requirements

1. Determine the amount of vacation expense for one month.
2. Journalize the entry to accrue the vacation expense for the month.

Learning Objective 3

S11-11 Accounting for warranty expense and warranty payable

Trail Runner guarantees its snowmobiles for three years. Company experience indicates that warranty costs will be approximately 5% of sales.

Assume that the Trail Runner dealer in Colorado Springs made sales totaling $600,000 during 2018. The company received cash for 20% of the sales and notes receivable for the remainder. Warranty payments totaled $10,000 during 2018.

Requirements

1. Record the sales, warranty expense, and warranty payments for the company. Ignore cost of goods sold.
2. Assume the Estimated Warranty Payable is $0 on January 1, 2018. Post the 2018 transactions to the Estimated Warranty Payable T-account. At the end of 2018, how much in Estimated Warranty Payable does the company owe?

Learning Objective 4

S11-12 Accounting treatment for contingencies

Freeman Motors, a motorcycle manufacturer, had the following contingencies.

a. Freeman estimates that it is reasonably possible but not likely that it will lose a current lawsuit. Freeman's attorneys estimate the potential loss will be $4,500,000.

b. Freeman received notice that it was being sued. Freeman considers this lawsuit to be frivolous.

c. Freeman is currently the defendant in a lawsuit. Freeman believes it is likely that it will lose the lawsuit and estimates the damages to be paid will be $75,000.

Determine the appropriate accounting treatment for each of the situations Freeman is facing.

Learning Objective 5

S11-13 Computing times-interest-earned ratio

Abernathy Electronics reported the following amounts on its 2018 income statement:

Year Ended December 31, 2018	
Net income	$ 45,000
Income tax expense	6,750
Interest expense	3,750

What is Abernathy's times-interest-earned ratio for 2018? (Round to two decimals.)

> Exercises

E11-14 Recording sales tax

Learning Objective 1

Sales Tax Payable $16,100

Consider the following transactions of Sapphire Software:

Mar. 31	Recorded cash sales of $230,000, plus sales tax of 7% collected for the state of New Jersey.
Apr. 6	Sent March sales tax to the state.

Journalize the transactions for the company. Ignore cost of goods sold.

E11-15 Recording note payable transactions

Learning Objective 1

Aug. 1, 2018 Interest Expense $840

Consider the following note payable transactions of Creative Video Productions.

2017	
Aug. 1	Purchased equipment costing $16,000 by issuing a one-year, 9% note payable.
Dec. 31	Accrued interest on the note payable.
2018	
Aug. 1	Paid the note payable plus interest at maturity.

Journalize the transactions for the company.

E11-16 Recording and reporting current liabilities

Learning Objective 1

Dec. 31 Subscription Revenue $80

Watson Publishing completed the following transactions during 2018:

Oct. 1	Sold a six-month subscription (starting on November 1), collecting cash of $240, plus sales tax of 8%.
Nov. 15	Remitted (paid) the sales tax to the state of Tennessee.
Dec. 31	Made the necessary adjustment at year-end to record the amount of subscription revenue earned during the year.

Journalize the transactions (explanations are not required). Round to the nearest dollar.

E11-17 Journalizing current liabilities

Learning Objectives 1, 2

Salaries Expense $3,400

Erin O'Neil Associates reported short-term notes payable and salaries payable as follows:

	2018	2017
Current Liabilities—partial:		
Short-term Notes Payable	$ 16,900	$ 16,000
Salaries Payable	3,400	4,000

During 2018, O'Neil paid off both current liabilities that were left over from 2017, borrowed cash on short-term notes payable, and accrued salaries expense. Journalize all four of these transactions for O'Neil during 2018. Assume no interest on short-term notes payable of $16,000.

CHAPTER 11

Learning Objective 2

1. Net Pay $576.69

E11-18 Computing and recording gross and net pay

Hugh Stanley manages a Dairy House drive-in. His straight-time pay is $12 per hour, with time-and-a-half for hours in excess of 40 per week. Stanley's payroll deductions include withheld income tax of 20%, FICA tax, and a weekly deduction of $5 for a charitable contribution to United Way. Stanley worked 58 hours during the week.

Requirements

1. Compute Stanley's gross pay and net pay for the week. Assume earnings to date are $18,000.
2. Journalize Dairy Houses wages expense accrual for Stanley's work. An explanation is not required.
3. Journalize the subsequent payment of wages to Stanley.

Learning Objective 2

1. Payroll Tax Expense $6,063.00

E11-19 Recording employer payroll taxes and employee benefits

Ricardo's Mexican Restaurant incurred salaries expense of $62,000 for 2018. The payroll expense includes employer FICA tax, in addition to state unemployment tax and federal unemployment tax. Of the total salaries, $22,000 is subject to unemployment tax. Also, the company provides the following benefits for employees: health insurance (cost to the company, $3,000), life insurance (cost to the company, $330), and retirement benefits (cost to the company, 10% of salaries expense).

Requirements

1. Journalize Ricardo's expenses for employee benefits and for payroll taxes. Explanations are not required.
2. What was Ricardo's total expense for 2018 related to payroll?

Learning Objective 2

2. Salaries & Wages Payable $15,923.20

E11-20 Recording employee and employer payroll taxes

County Company had the following partially completed payroll register:

Earnings			Withholdings								
Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	United Way	Total Withholdings	Net Pay	Check No.	Salaries and Wages Expense
$ 77,000	$ 4,500				$ 900	$ 90	$ 15			801	
112,000	7,200				1,200	144	35			802	
48,000	3,300				600	66	0			803	
61,000	3,300				850	66	20			804	
0	4,500				1,100	90	0			805	
$ 298,000	$ 22,800				$ 4,650	$ 456	$ 70				

Requirements

1. Complete the payroll register. Round to two decimals.
2. Journalize County Company's salaries and wages expense accrual for the current pay period.
3. Journalize County Company's expenses for employer payroll taxes for the current pay period.
4. Journalize the payment to employees.
5. Journalize the payment for withholdings and employer payroll taxes.

E11-21 Accounting for warranty expense and warranty payable

Learning Objective 3

1. Warranty Expense $10,170

The accounting records of Sculpted Ceramics included the following at January 1, 2018:

Estimated Warranty Payable	
	5,000 Beg. Bal.

In the past, Sculpted's warranty expense has been 9% of sales. During 2018, Sculpted made sales of $113,000 and paid $7,000 to satisfy warranty claims.

Requirements

1. Journalize Sculpted's warranty expense and warranty payments during 2018. Explanations are not required.
2. What balance of Estimated Warranty Payable will Sculpted report on its balance sheet at December 31, 2018?

E11-22 Accounting for warranties, vacation, and bonuses

Learning Objective 3

Dec. 31 Employee Bonus Expense $1,515

McNight Industries completed the following transactions during 2018:

Nov. 1	Made sales of $52,000. McNight estimates that warranty expense is 6% of sales. (Record only the warranty expense.)
20	Paid $1,600 to satisfy warranty claims.
Dec. 31	Estimated vacation benefits expense to be $6,000.
31	McNight expected to pay its employees a 3% bonus on net income after deducting the bonus. Net income for the year is $52,000.

Journalize the transactions. Explanations are not required. Round to the nearest dollar.

E11-23 Accounting treatment for contingencies

Learning Objective 4

Analyze the following independent situations.

a. Weaver, Inc. is being sued by a former employee. Weaver believes that there is a remote chance that the employee will win. The employee is suing Weaver for damages of $40,000.

b. Gulf Oil Refinery had a gas explosion on one of its oil rigs. Gulf believes it is likely that it will have to pay environmental clean-up costs and damages in the future due to the gas explosion. Gulf cannot estimate the amount of the damages.

c. Lawson Enterprises estimates that it will have to pay $75,000 in warranty repairs next year.

Determine how each contingency should be treated.

Learning Objective 5

1. Cash Ratio 118.80 times

E11-24 Computing times-interest-earned ratio

The following financial information was obtained from the year ended 2018 income statements for Cash Automotive and Pennington Automotive:

	Cash	Pennington
Net income	$ 26,070	$ 74,188
Income tax expense	9,270	27,080
Interest expense	300	2,900

Requirements

1. Compute the times-interest-earned ratio for each company. Round to two decimals.
2. Which company was better able to cover its interest expense?

> Problems Group A

Learning Objectives 1, 2

1d. Rent Revenue $3,000

P11-25A Journalizing and posting liabilities

The general ledger of Seal-N-Ship at June 30, 2018, the end of the company's fiscal year, includes the following account balances before payroll and adjusting entries.

Accounts Payable	$ 114,000
Interest Payable	0
Salaries Payable	0
Employee Income Taxes Payable	0
FICA—OASDI Taxes Payable	0
FICA—Medicare Taxes Payable	0
Federal Unemployment Taxes Payable	0
State Unemployment Taxes Payable	0
Unearned Rent Revenue	7,200
Long-term Notes Payable	210,000

The additional data needed to develop the payroll and adjusting entries at June 30 are as follows:

a. The long-term debt is payable in annual installments of $42,000, with the next installment due on July 31. On that date, Seal-N-Ship will also pay one year's interest at 9%. Interest was paid on July 31 of the preceding year. Make the adjusting entry to accrue interest expense at year-end.

b. Gross unpaid salaries for the last payroll of the fiscal year were $4,700. Assume that employee income taxes withheld are $910 and that all earnings are subject to OASDI.

c. Record the associated employer taxes payable for the last payroll of the fiscal year, $4,700. Assume that the earnings are not subject to unemployment compensation taxes

d. On February 1, the company collected one year's rent of $7,200 in advance.

Requirements

1. Using T-accounts, open the listed accounts and insert the unadjusted June 30 balances.
2. Journalize and post the June 30 payroll and adjusting entries to the accounts that you opened. Identify each adjusting entry by letter. Round to the nearest dollar.
3. Prepare the current liabilities section of the balance sheet at June 30, 2018.

P11-26A Computing and journalizing payroll amounts

Learning Objective 2

1. Net Pay $152,199

Logan White is general manager of Valuepoint Salons. During 2018, White worked for the company all year at a $13,600 monthly salary. He also earned a year-end bonus equal to 15% of his annual salary.

White's federal income tax withheld during 2018 was $1,360 per month, plus $4,876 on his bonus check. State income tax withheld came to $150 per month, plus $60 on the bonus. FICA tax was withheld on the annual earnings. White authorized the following payroll deductions: Charity Fund contribution of 1% of total earnings and life insurance of $40 per month.

Valuepoint incurred payroll tax expense on White for FICA tax. The company also paid state unemployment tax and federal unemployment tax.

Requirements

1. Compute White's gross pay, payroll deductions, and net pay for the full year 2018. Round all amounts to the nearest dollar.
2. Compute Valuepoint's total 2018 payroll tax expense for White.
3. Make the journal entry to record Valuepoint's expense for White's total earnings for the year, his payroll deductions, and net pay. Debit Salaries Expense and Bonus Expense as appropriate. Credit liability accounts for the payroll deductions and Cash for net pay. An explanation is not required.
4. Make the journal entry to record the accrual of Valuepoint's payroll tax expense for White's total earnings.
5. Make the journal entry for the payment of the payroll withholdings and taxes.

P11-27A Journalizing liability transactions

Learning Objectives 1, 3

Jan. 29 Cash $16,695

The following transactions of Plymouth Pharmacies occurred during 2017 and 2018:

2017	
Jan. 9	Purchased computer equipment at a cost of $12,000, signing a six-month, 9% note payable for that amount.
29	Recorded the week's sales of $63,000, three-fourths on credit and one-fourth for cash. Sales amounts are subject to a 6% state sales tax. Ignore cost of goods sold.
Feb. 5	Sent the last week's sales tax to the state.
Jul. 9	Paid the six-month, 9% note, plus interest, at maturity.
Aug. 31	Purchased merchandise inventory for $9,000, signing a six-month, 10% note payable. The company uses the perpetual inventory system.
Dec. 31	Accrued warranty expense, which is estimated at 4% of sales of $609,000.
31	Accrued interest on all outstanding notes payable.
2018	
Feb. 28	Paid the six-month 10% note, plus interest, at maturity.

CHAPTER 11

Journalize the transactions in Plymouth's general journal. Explanations are not required. Round to the nearest dollar.

Learning Objectives 3, 4

1. June 30 Warranty Expense $7,000

P11-28A Journalizing liability transactions

The following transactions of Jasmine Reef occurred during 2018:

Apr. 30	Reef is party to a patent infringement lawsuit of $190,000. Reef's attorney is certain it is remote that Reef will lose this lawsuit.
Jun. 30	Estimated warranty expense at 2% of sales of $350,000.
Jul. 28	Warranty claims paid in the amount of $5,500.
Sep. 30	Reef is party to a lawsuit for copyright violation of $80,000. Reef's attorney advises that it is probable Reef will lose this lawsuit. The attorney estimates the loss at $80,000.
Dec. 31	Reef estimated warranty expense on sales for the second half of the year of $510,000 at 2%.

Requirements

1. Journalize required transactions, if any, in Reef's general journal. Explanations are not required.
2. What is the balance in Estimated Warranty Payable assuming a beginning balance of $0?

Learning Objective 5

1. Net Income $4,305

P11-29A Computing times-interest-earned ratio

The income statement for California Communications follows. Assume California Communications signed a 3-month, 9%, $3,000 note on June 1, 2018, and that this was the only note payable for the company.

CALIFORNIA COMMUNICATIONS Income Statement Year Ended July 31, 2018		
Net Sales Revenue		$ 21,800
Cost of Goods Sold		14,000
Gross Profit		7,800
Operating Expenses:		
Selling Expenses	$ 720	
Administrative Expenses	1,650	
Total Operating Expenses		2,370
Operating Income		5,430
Other Income and (Expenses):		
Interest Expense	?	
Total Other Income and (Expenses)		?
Net Income before Income Tax Expense		?
Income Tax Expense		1,080
Net Income		$?

CHAPTER 11

Requirements

1. Fill in the missing information for California's year ended July 31, 2018, income statement. Round to the nearest dollar.
2. Compute the times-interest-earned ratio for the company. Round to two decimals.

> Problems Group B

P11-30B Journalizing and posting liabilities

Learning Objectives 1, 2

1d. Rent Revenue $2,250

The general ledger of Prompt Ship at June 30, 2018, the end of the company's fiscal year, includes the following account balances before payroll and adjusting entries.

Accounts Payable	$ 118,000
Interest Payable	0
Salaries Payable	0
Employee Income Taxes Payable	0
FICA—OASDI Taxes Payable	0
FICA—Medicare Taxes Payable	0
Federal Unemployment Taxes Payable	0
State Unemployment Taxes Payable	0
Unearned Rent Revenue	5,400
Long-term Notes Payable	198,000

The additional data needed to develop the payroll and adjusting entries at June 30 are as follows:

a. The long-term debt is payable in annual installments of $39,600, with the next installment due on July 31. On that date, Prompt Ship will also pay one year's interest at 10%. Interest was paid on July 31 of the preceding year. Make the adjusting entry to accrue interest expense at year-end.

b. Gross unpaid salaries for the last payroll of the fiscal year were $4,800. Assume that employee income taxes withheld are $920 and that all earnings are subject to OASDI.

c. Record the associated employer taxes payable for the last payroll of the fiscal year, $4,800. Assume that the earnings are not subject to unemployment compensation taxes.

d. On February 1, the company collected one year's rent of $5,400 in advance.

Requirements

1. Using T-accounts, open the listed accounts and insert the unadjusted June 30 balances.
2. Journalize and post the June 30 payroll and adjusting entries to the accounts that you opened. Identify each adjusting entry by letter. Round to the nearest dollar.
3. Prepare the current liabilities section of the balance sheet at June 30, 2018.

CHAPTER 11

Learning Objective 2

1. Net Pay $128,360

P11-31B Computing and journalizing payroll amounts

Liam Wallace is general manager of Moonwalk Salons. During 2018, Wallace worked for the company all year at a $13,400 monthly salary. He also earned a year-end bonus equal to 5% of his annual salary.

Wallace's federal income tax withheld during 2018 was $2,010 per month, plus $1,608 on his bonus check. State income tax withheld came to $110 per month, plus $80 on the bonus. FICA tax was withheld on the annual earnings. Wallace authorized the following payroll deductions: Charity Fund contribution of 2% of total earnings and life insurance of $15 per month.

Moonwalk incurred payroll tax expense on Wallace for FICA tax. The company also paid state unemployment tax and federal unemployment tax.

Requirements

1. Compute Wallace's gross pay, payroll deductions, and net pay for the full year 2018. Round all amounts to the nearest dollar.
2. Compute Moonwalk's total 2018 payroll tax expense for Wallace.
3. Make the journal entry to record Moonwalk's expense for Wallace's total earnings for the year, his payroll deductions, and net pay. Debit Salaries Expense and Bonus Expense as appropriate. Credit liability accounts for the payroll deductions and Cash for net pay. An explanation is not required.
4. Make the journal entry to record the accrual of Moonwalk's payroll tax expense for Wallace's total earnings.
5. Make the journal entry for the payment of the payroll withholdings and taxes.

Learning Objectives 1, 3

Jan. 29 Cash $18,020

P11-32B Journalizing liability transactions

The following transactions of Philadelphia Pharmacies occurred during 2017 and 2018:

2017	
Jan. 9	Purchased computer equipment at a cost of $7,000, signing a six-month, 8% note payable for that amount.
29	Recorded the week's sales of $68,000, three-fourths on credit and one-fourth for cash. Sales amounts are subject to a 6% state sales tax. Ignore cost of goods sold.
Feb. 5	Sent the last week's sales tax to the state.
Jul. 9	Paid the six-month, 8% note, plus interest, at maturity.
Aug. 31	Purchased merchandise inventory for $3,000, signing a six-month, 10% note payable. The company uses a perpetual inventory system.
Dec. 31	Accrued warranty expense, which is estimated at 2% of sales of $609,000.
31	Accrued interest on all outstanding notes payable.
2018	
Feb. 28	Paid the six-month 10% note, plus interest, at maturity.

Journalize the transactions in Philadelphia's general journal. Explanations are not required.

P11-33B Journalizing liability transactions

Learning Objectives 3, 4

1. June 30 Warranty Expense $11,700

The following transactions of Belkin Howe occurred during 2018:

Apr. 30	Howe is party to a patent infringement lawsuit of $230,000. Howe's attorney is certain it is remote that Howe will lose this lawsuit.
Jun. 30	Estimated warranty expense at 3% of sales of $390,000.
Jul. 28	Warranty claims paid in the amount of $6,300.
Sep. 30	Howe is party to a lawsuit for copyright violation of $90,000. Howe's attorney advises that it is probable Howe will lose this lawsuit. The attorney estimates the loss at $90,000.
Dec. 31	Howe estimated warranty expense on sales for the second half of the year of $520,000 at 3%.

Requirements

1. Journalize required transactions, if any, in Howe's general journal. Explanations are not required.
2. What is the balance in Estimated Warranty Payable assuming a beginning balance of $0?

P11-34B Computing times-interest-earned ratio

Learning Objective 5

1. Net Income $9,620

The income statement for Vermont Communications follows. Assume Vermont Communications signed a 3-month, 3%, $6,000 note on June 1, 2018, and that this was the only note payable for the company.

VERMONT COMMUNICATIONS Income Statement Year Ended July 31, 2018		
Net Sales Revenue		$ 26,500
Cost of Goods Sold		12,200
Gross Profit		14,300
Operating Expenses:		
Selling Expenses	$ 690	
Administrative Expenses	1,550	
Total Operating Expenses		2,240
Operating Income		12,060
Other Income and (Expenses):		
Interest Expense	?	
Total Other Income and (Expenses)		?
Net Income before Income Tax Expense		?
Income Tax Expense		2,410
Net Income		$?

Requirements

1. Fill in the missing information for Vermont's year ended July 31, 2018, income statement. Round to the nearest dollar.
2. Compute the times-interest-earned ratio for the company. Round to two decimals.

CHAPTER 11

CRITICAL THINKING

> Using Excel

P11-35 Using Excel for Payroll

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Ankel Footwear employees three salespeople, and pays time-and-a-half for overtime. Weekly paychecks are distributed on the Tuesday following the last day of the week (Saturday). Ankel withholds income tax (20%), FICA—OASDI (6.2%), and FICA—Medicare (1.45%). Ankel also pays payroll taxes for FICA—OASDI (6.2%), FICA—Medicare (1.45%), and state and federal unemployment (5.4% and 0.6% respectively). The payroll data for the three salespeople for the week ended March 31 follows:

Name	Straight Time Rate	Hours Worked	Beginning Cumulative Earnings
Jimmy Chew	$ 15	46	$ 420
Manny Blanik	17	50	540
Alexa King	22	38	480

Requirements

1. Complete the Payroll Register for the three employees for the week ended March 31, 2018.
2. Complete the Payroll Tax Register.
3. Compute the total payroll expense for the week ended March 31.
4. Record the payroll entries Ankel makes for each of the following:
   a. Wage expense related to the three employees on Saturday, March 31.
   b. Employer payroll taxes related to the three employees.
   c. Payment of all payroll taxes (employee and employer related) on April 3.
   d. Payment of wages on Tuesday, April 3.

> Continuing Problem

P11-36 Accounting for liabilities of a known amount

This problem continues the Canyon Canoe Company situation from Chapter 10. Amber and Zack Wilson are continuing their analysis of the company's position and believe the company will need to borrow $15,000 in order to expand operations. They consult Rivers Nation Bank and secure a 6%, one-year note on September 1, 2019, with interest due at maturity. Additionally, the company hires an employee, John Vance, on September 1. John will receive a salary of $3,000 per month. Payroll deductions include federal income tax at 25%, OASDI at 6.2%, Medicare at 1.45%, and monthly health insurance premium of $250. The company will incur matching FICA taxes, FUTA tax at 0.6%, and SUTA tax at 5.4%. Round calculations to two decimals. Omit explanations on journal entries.

Requirements

1. Record the issuance of the $15,000 note payable on September 1, 2019.
2. Record the employee payroll and employer payroll tax entries on September 30, 2019.
3. Record all payments related to September's payroll. Payments are made on October 15, 2019.

4. Record the entry to accrue interest due on the note at December 31, 2019.
5. Record the entry Canyon Canoe Company would make to record the payment to the bank on September 1, 2020.

> Tying It All Together Case 11-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review UnitedHealth Group Incorporated's 2015 annual report (http://www.unitedhealthgroup.com/~/media/UHG/PDF/2015/UNH-Q4-2015-Form-10-K.ashx?la=en).

UnitedHealth Group Incorporated is a diversified health and well-being company dedicated to helping people live healthier lives. The company operates under two distinct platforms: health benefits (UnitedHealthcare) and health services (Optum).

Requirements

1. What are contingent liabilities?
2. Review Note 13 (Commitments and Contingencies), specifically the section labeled Legal Matters. Does UnitedHealth Group Incorporated report any contingencies? If so, provide a summary.
3. How should a company handle contingent liabilities that are reasonably possible or probable but cannot be estimated?
4. Review Note 13 (Commitments and Contingencies), specifically the section labeled California Claims Processing Matter. How did UnitedHealth Group Incorporated handle the recording of this contingent liability?

> Decision Cases

Decision Case 11-1

Golden Bear Construction operates throughout California. The owner, Gaylan Beavers, employs 15 work crews. Construction supervisors report directly to Beavers, and the supervisors are trusted employees. The home office staff consists of an accountant and an office manager.

Because employee turnover is high in the construction industry, supervisors hire and fire their own crews. Supervisors notify the office of all personnel changes. Also, supervisors forward the employee W-4 forms to the home office. Each Thursday, the supervisors submit weekly time sheets for their crews, and the accountant prepares the payroll. At noon on Friday, the supervisors come to the office to get paychecks for distribution to the workers at 5 p.m.

The company accountant prepares the payroll, including the paychecks. Beavers signs all paychecks. To verify that each construction worker is a bona fide employee, the accountant matches the employee's endorsement signature on the back of the canceled paycheck with the signature on that employee's W-4 form.

Requirements

1. Identify one way that a supervisor can defraud Golden Bear Construction under the present system.
2. Discuss a control feature that the company can use to safeguard against the fraud you identified in Requirement 1.

Decision Case 11-2

Sell-Soft is the defendant in numerous lawsuits claiming unfair trade practices. Sell-Soft has strong incentives not to disclose these contingent liabilities. However, GAAP requires that companies report their contingent liabilities.

Requirements

1. Why would a company prefer *not* to disclose its contingent liabilities?
2. Describe how a bank could be harmed if a company seeking a loan did not disclose its contingent liabilities.
3. What ethical tightrope must companies walk when they report contingent liabilities?

> Ethical Issue 11-1

Many small businesses have to squeeze down costs any way they can just to survive. One way many businesses do this is by hiring workers as "independent contractors" rather than as regular employees. Unlike rules for regular employees, a business does not have to pay Social Security (FICA) taxes and unemployment insurance payments for independent contractors. Similarly, it does not have to withhold federal, state, or local income taxes or the employee's share of FICA taxes. The IRS has a "20 factor test" that determines whether a worker should be considered an employee or a contractor, but many businesses ignore those rules or interpret them loosely in their favor. When workers are treated as independent contractors, they do not get a W-2 form at tax time (they get a 1099 instead), they do not have any income taxes withheld, and they find themselves subject to "self-employment" taxes, by which they bear the brunt of both the employee's and the employer's shares of FICA taxes.

Requirements

1. When a business abuses this issue, how is the independent contractor hurt?
2. If a business takes an aggressive position—that is, interprets the law in a very slanted way—is there an ethical issue involved? Who is hurt?

> Financial Statement Case 11-1

Details about a company's liabilities appear in a number of places in the annual report. Visit **http://www.pearsonhighered.com/Horngren** to view a link to Target Corporation's Annual Report. Use **Target Corporation**'s fiscal 2015 financial statements to answer the following questions.

Requirements

1. Give the breakdown of Target's current liabilities at January 30, 2016.
2. Calculate Target's times-interest-earned ratio for the year ending January 30, 2016. How does Target's ratio compare to **Kohl's Corporation's** ratio?

> Communication Activity 11-1

In 150 words or fewer, explain how contingent liabilities are accounted for.

> Quick Check Answers

1. a **2.** a **3.** c **4.** a **5.** d **6.** b **7.** b **8.** c **9.** d **10.** b

Chapter 11
Current Liabilities and Payroll

Review Questions

1. The three main characteristics of liabilities are:
- They occur because of a past transaction or event.
- They create a present obligation for future payment of cash or services.
- They are an unavoidable obligation.

2. Current liabilities must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year. Examples of current liabilities include: Accounts Payable, Notes Payable due within one year, Salaries Payable, Interest Payable, Sales Tax Payable, Income Tax Payable and Unearned Revenue.

3. Sales tax is recorded as a liability when it is charged to the customer; it is usually calculated as a percentage of the amount of the sale. It is not considered an expense to the business, but a current liability. Companies collect the sales tax and then forward it to the state at regular intervals.

4. Unearned revenue arises when a business has received cash in advance of providing goods or performing work and, therefore, has an obligation to provide goods or services to the customer in the future.

5. Short-term notes payable represent a written promise by the business to pay a debt, usually involving interest, within one year or less.

6. The principal amount that will be paid within one year will be reported in the current liabilities as current portion of notes payable.

7. Gross pay is the total amount of salary, wages, commissions, and bonuses earned by the employee during a pay period, before taxes or any other deductions. Gross pay is an expense to the employer. Net pay is the amount the employee gets to keep. Net pay equals gross pay minus all deductions paid by the employee such as income tax withheld.

8. Required payroll withholding deductions are:

Withholding Deductions	Tax Rate
Federal, State and Local Income Tax	The amount withheld depends on the employee’s gross pay, filing status, and the number of withholding allowances he or she claims.
FICA—OASDI (old age, survivors, and disability insurance)	For 2016, the OASDI tax applies to the first $118,500 of employee earnings in a year. The taxable amount of earnings is adjusted annually. The OASDI tax rate at the time of this writing is 6.2%.
FICA—Medicare (medical benefits)	Medicare applies to all employee earnings—that means that there is no maximum tax. At the time of this writing, this tax rate is 1.45% on the first $200,000 of earnings, then 2.35% on any earnings above $200,000.

9. Many companies use a payroll register to help summarize the earnings, withholdings, and net pay for each employee.

10. The payroll taxes an employer is responsible for paying are:

- Employer FICA tax (OASDI and Medicare)
- State unemployment compensation tax (SUTA)
- Federal unemployment compensation tax (FUTA)

11. There are two main controls for payroll: controls for efficiency and controls to safeguard payroll disbursements.

Using computer processing for payroll brings efficiency to the process. The payroll data are stored in a file, and the computer makes the calculations, prints paychecks, and updates all records electronically. In addition, companies may require direct deposits for employees’ pay so that paper checks do not have to be written to each employee. Direct deposits also increase efficiency by reducing the amount of reconciliation needed on outstanding checks.

Controls to safeguard payroll disbursements include: Hiring and firing employees should be separated from accounting and from passing out paychecks. Photo IDs ensure that only actual employees are paid. Employees clock in at the start and clock out at the end of the workday to prove their attendance and hours worked.

12. The matching principle requires businesses to record Warranty Expense in the same period that the company records the revenue related to that warranty. The expense, therefore, is incurred when the company makes a sale, not when the company pays the warranty claims.

13. A contingent liability is a potential, rather than an actual, liability because it depends on a future event. For a contingent liability to be paid, some event (the contingency) must happen in the future. Some examples of contingencies are lawsuits and co-signing a note for another entity.

14. Contingencies that are reasonably possible have more chance of occurring but are not likely. A reasonably possible contingency should be described in the notes to the financial statements.

15. The times-interest-earned ratio is calculated as earnings before interest and taxes or EBIT (Net income + Income tax expense + Interest expense) divided by interest expense. Investors can use the times-interest-earned ratio to evaluate a business's ability to pay interest expense. This ratio measures the number of times earnings before interest and taxes can cover (pay) interest expense.

Short Exercises

S11-1

a. current liability (CL)
b. long-term liability (LTL)
c. current liability (CL)
d. current liability (CL)
e. current liability (CL)
f. current liability (CL)
g. current liability (CL)

S11-2
Requirement 1

Date	Accounts and Explanation	Debit	Credit
July 5	Accounts Receivable	57,200	
	Sales Revenue		55,000
	Sales Tax Payable ($55,000 × 0.04)		2,200
	To record sales revenue on account and the related sales tax.		

S11-2, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Sales Tax Payable	2,200	
	Cash		2,200
	To record cash payment for sales tax payable.		

S11-3
Requirement 1

Date	Accounts and Explanation	Debit	Credit
June 1	Cash	63,000	
	Unearned Revenue		63,000
	Collected cash for future services.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	31,500	
	Subscription Revenue ($63,000 × 6/12)		31,500
	To record subscription revenue earned that was collected in advance.		

S11-4
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2017			
Dec. 31	Merchandise Inventory	13,000	
	Notes Payable		13,000
	Purchased merchandise inventory in exchange for one year, 9% note.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($13,000 × 0.09 × 6/12)	585	
	Interest Payable		585
	Accrued interest expense at year-end.		

S11-4, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Notes Payable	13,000	
	Interest Expense ($13,000 × 0.09 × 6/12)	585	
	Interest Payable	585	
	Cash		14,170
	Paid note and interest at maturity.		

S11-5

Irving will report $56,000 as current portion of notes payable in the current liability section. The remaining $224,000 will show as a notes payable in the long-term liability section.

S11-6
Requirement 1

Straight-time pay for 40 hours ($12 × 40 hours)	$ 480
Overtime pay for 20 hours (20 hours × $12 × 1.5)	360
Gross Pay	$ 840

Requirement 2

Gross pay		$ 840.00
Withholding deductions:		
Employee income tax (15%)	$ 126.00	
Employee OASDI tax (6.2%)	52.08	
Employee Medicare tax (1.45%)	12.18	
Total withholdings		190.26
Net (take-home) pay		$ 649.74

S11-6, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Wages Expense	840.00	
	Employee Income Taxes Payable		126.00
	FICA—OASDI Taxes Payable		52.08
	FICA—Medicare Taxes Payable		12.18
	Wages Payable		649.74
	To record wages expense and payroll withholdings.		
	Wages Payable	649.74	
	Cash		649.74
	To record payment of wages.		

S11-7
Requirement 1

Gross pay		$ 12,100.00
Withholding deductions:		
Employee income tax (10%)	$ 1,210.00	
Employee OASDI tax (6.2%)*	595.20	
Employee Medicare tax (1.45%)	175.45	
Employee health insurance	250.00	
Employee contribution to United Way (5%)	605.00	
Total withholdings		2,835.65
Net (take-home) pay		$ 9,264.35

*Calculation of tax for OASDI	
Employee earnings subject to tax	$ 118,500
Employee earnings prior to the current month	– 108,900
Current pay subject to tax	9,600
Tax rate	× 0.062
Tax to be withheld from paycheck	$ 595.20

S11-7, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
Oct. 31	Salaries Expense	12,100.00	
	Employee Income Taxes Payable		1,210.00
	FICA—OASDI Taxes Payable		595.20
	FICA—Medicare Taxes Payable		175.45
	Employee Health Insurance Payable		250.00
	United Way Payable		605.00
	Salaries Payable		9,264.35
	To record salaries expense and payroll withholdings.		
	Salaries Payable	9,264.35	
	Cash		9,264.35
	To record payment of salaries.		

S11-8

Date	Accounts and Explanation	Debit	Credit
	Salaries Expense	26,000	
	FICA—OASDI Taxes Payable (6.2% × $26,000)		1,612
	FICA—Medicare Taxes Payable (1.45% × $26,000)		377
	Employee Income Taxes Payable		2,000
	Salaries Payable		22,011
	To record salaries expense and payroll withholdings.		
	Payroll Tax Expense	3,549	
	FICA—OASDI Taxes Payable (6.2% × $26,000)		1,612
	FICA—Medicare Taxes Payable (1.45% × $26,000)		377
	Federal Unemployment Taxes Payable (0.6% × $26,000)		156
	State Unemployment Taxes Payable (5.4% × $26,000)		1,404
	To record employer's payroll tax expense.		
	FICA—OASDI Taxes Payable ($1,612 + $1,612)	3,224	
	FICA—Medicare Taxes Payable ($377 + $377)	754	
	Employee Income Taxes Payable	2,000	
	Federal Unemployment Taxes Payable	156	
	State Unemployment Taxes Payable	1,404	
	Cash		7,538
	Payment of payroll taxes		

S11-9
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Employee Bonus Expense	3,047.62	
	Employee Bonus Payable		3,047.62
	To record employee bonus expense.		
	(5% × $64,000) / (1.05) = $3,047.62		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Employee Bonus Payable	3,047.62	
	Cash		3,047.62
	To record payment of employee bonus.		

S11-10
Requirement 1

Employees	3	Weekly salary	$1,250
× Vacation Days per month	× 2	÷ Days in the week	5
= Total days to accrue	6	= Pay per day	= $250
Total amount to accrue 6 days times $250 per day = $1,500 for one month			

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Vacation Benefits Expense	1,500	
	Vacation Benefits Payable		1,500
	To record employee vacation benefits expense.		

S11-11
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018	Cash (20% × \$600,000)	120,000	
	Notes Receivable (80% × \$600,000)	480,000	
	Sales Revenue		600,000
	To record sales for 2018.		
	Warranty Expense (5% × \$600,000)	30,000	
	Estimated Warranty Payable		30,000
	To accrue warranty payable.		
	Estimated Warranty Payable	10,000	
	Cash		10,000
	Warranty payments.		

Requirement 2

Estimated Warranty Payable

Payments 10,000	30,000 Accrual
	20,000 Bal.

S11-12

Situation	Appropriate accounting treatment
a.	Describe the situation in a note to the financial statements.
b.	Do not disclose.
c.	Record an expense (or loss) and a liability based on estimated amounts.

S11-13

Times-interest-earned ratio

Net Income	\$ 45,000
+ Income Tax Expense	+ 6,750
+ Interest Expense	+ 3,750
Total	\$ 55,500
÷ Interest Expense	÷ 3,750
Ratio for 2018	14.80

Exercises

E11-14

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Cash	246,100	
	Sales Revenue		230,000
	Sales Tax Payable ($230,000 × 0.07)		16,100
	To record cash sales and the related sales tax.		
Apr. 6	Sales Tax Payable	16,100	
	Cash		16,100
	To record cash payment for sales tax payable.		

E11-15

Date	Accounts and Explanation	Debit	Credit
2017			
Aug. 1	Equipment	16,000	
	Notes Payable		16,000
	Purchased equipment in exchange for one-year, 9% note.		
Dec. 31	Interest Expense ($16,000 × 0.09 × 5/12)	600	
	Interest Payable		600
	Accrued interest expense at year-end.		
2018			
Aug. 1	Notes Payable	16,000	
	Interest Expense ($16,000 × 0.09 × 7/12)	840	
	Interest Payable	600	
	Cash		17,440
	Paid note and interest at maturity.		

E11-16

Date	Accounts and Explanation	Debit	Credit
2018			
Oct. 1	Cash	259	
	Unearned Revenue		240
	Sales Tax Payable ($240 × 8%)		19
	To record unearned revenue and the related sales tax.		
Nov. 15	Sales Tax Payable	19	
	Cash		19
	To record cash payment for sales tax payable.		
Dec. 31	Unearned Revenue	80	
	Subscription Revenue		80
	To record subscription revenue earned that was collected in advance. $240 × 2/6.		

E11-17

Date	Accounts and Explanation	Debit	Credit
2018			
	Notes Payable	16,000	
	Cash		16,000
	To record payment of 2017 notes.		
	Salaries Payable	4,000	
	Cash		4,000
	To record payment for salaries payable.		
	Cash	16,900	
	Notes Payable		16,900
	To record cash borrowed on notes payable.		
	Salaries Expense	3,400	
	Salaries Payable		3,400
	To record accrued salaries.		

E11-18
Requirement 1

Straight-time pay for 40 hours ($12 × 40 hours)	$ 480.00
Overtime pay for 18 hours: (18 × $12 × 1.5)	324.00
Gross Pay	$ 804.00

Gross pay		$ 804.00
Withholding deductions:		
Employee income tax (20%)	$ 160.80	
Employee OASDI tax (6.2%)	49.85	
Employee Medicare tax (1.45%)	11.66	
Employee contribution to United Way	5.00	
Total withholdings		227.31
Net (take-home) pay		$ 576.69

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Wages Expense	804.00	
	Employee Income Taxes Payable		160.80
	FICA—OASDI Taxes Payable		49.85
	FICA—Medicare Taxes Payable		11.66
	United Way Payable		5.00
	Wages Payable		576.69

Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Wages Payable	576.69	
	Cash		576.69

E11-19
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Payroll Tax Expense	6,063.00	
	FICA—OASDI Taxes Payable (6.2% × $62,000)		3,844.00
	FICA—Medicare Taxes Payable (1.45% × $62,000)		899.00
	Federal Unemployment Taxes Payable (0.6% × $22,000)		132.00
	State Unemployment Taxes Payable (5.4% × $22,000)		1,188.00
	To record employer's payroll tax expense.		
	Employee Benefits Expense	9,530.00	
	Employee Health Insurance Payable		3,000.00
	Employee Life Insurance Payable		330.00
	Employee Retirement Benefits Payable (10% × $62,000)		6,200.00
	Accrual of employee benefit expenses.		

Requirement 2

Salaries Expense	$ 62,000.00
Payroll Tax Expense	6,063.00
Employee Benefits Expense	9,530.00
Total	$ 77,593.00

E11-20
Requirement 1

Earnings			Withholdings								
Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	United Way	Total Withholdings	Net Pay	Check No.	Salaries and Wages Expense
$ 77,000.00	$ 4,500.00	$ 81,500.00	$ 279.00	$ 65.25	$ 900.00	$ 90.00	$ 15.00	$ 1,349.25	$ 3,150.75	801	$ 4,500.00
112,000.00	7,200.00	119,200	403.00*	104.40	1,200.00	144.00	35.00	1,886.40	5,313.60	802	7,200.00
48,000.00	3,300.00	51,300.00	204.60	47.85	600.00	66.00	0.00	918.45	2,381.55	803	3,300.00
61,000.00	3,300.00	64,300.00	204.60	47.85	850.00	66.00	20.00	1,188.45	2,111.55	804	3,300.00
0	4,500.00	4,500.00	279.00	65.25	1,100.00	90.00	0.00	1,534.25	2,965.75	805	4,500.00
$ 298,000.00	$ 22,800.00	$ 320,800.00	$ 1,370.20	$ 330.60	$ 4,650.00	$ 456.00	$ 70.00	$ 6,876.80	$ 15,923.20		$ 22,800.00

*Calculation of tax for OASDI	
Employee earnings subject to tax	$ 118,500.00
Employee earnings prior to the current month	– 112,000.00
Current pay subject to tax	$ 6,500.00
Tax rate	× 0.062
Employee tax	$ 403.00

E11-20, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Salaries and Wages Expense	22,800.00	
	Employee Income Taxes Payable		4,650.00
	FICA—OASDI Taxes Payable		1,370.20
	FICA—Medicare Taxes Payable		330.60
	Health Insurance Payable		456.00
	United Way Payable		70.00
	Salaries and Wages Payable		15,923.20
	To record salaries and wages expense and payroll withholdings.		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Payroll Tax Expense	1,970.80	
	FICA—OASDI Taxes Payable *		1,370.20
	FICA—Medicare Taxes Payable (1.45% × $22,800)		330.60
	Federal Unemployment Taxes Payable (0.6% × $4,500 (first $7,000 only))		27.00
	State Unemployment Taxes Payable (5.4% × $4,500 (first $7,000 only))		243.00
	To record employer's payroll tax expense.		

*Calculation of tax for OASDI	
Employee earnings subject to tax	$ 118,500.00
Employee earnings prior to the current month	– 112,000.00
Current pay subject to tax	$ 6,500.00
Tax rate	× 0.062
Employer tax	$ 403.00
All others ($22,800 − $7,200) × 6.2%	967.20
	$ 1,370.20

E11-20, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
	Salaries and Wages Payable	15,923.20	
	Cash		15,923.20
	To record payment of salaries and wages.		

Requirement 5

Date	Accounts and Explanation	Debit	Credit
	Employee Income Taxes Payable	4,650.00	
	FICA—OASDI Taxes Payable ($1,370.20 + $1,370.20)	2,740.40	
	FICA—Medicare Taxes Payable ($330.60 + $330.60)	661.20	
	Health Insurance Payable	456.00	
	United Way Payable	70.00	
	Federal Unemployment Taxes Payable	27.00	
	State Unemployment Taxes Payable	243.00	
	Cash		8,847.60
	To record payment of payroll withholdings and taxes.		

E11-21
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
	Warranty Expense (9% × $113,000)	10,170	
	Estimated Warranty Payable		10,170
	Estimated Warranty Payable	7,000	
	Cash		7,000

Requirement 2

Estimated Warranty Payable

		5,000	Beg. Bal.
Payments	7,000	10,170	Accrual
		8,170	End Bal.

E11-22

Date	Accounts and Explanation	Debit	Credit
2018			
Nov. 1	Warranty Expense (6% × $52,000)	3,120	
	Estimated Warranty Payable		3,120
Nov. 20	Estimated Warranty Payable	1,600	
	Cash		1,600
Dec. 31	Vacation Benefits Expense	6,000	
	Vacation Benefits Payable		6,000
Dec. 31	Employee Bonus Expense (3% × 52,000) / 1.03	1,515	
	Employee Bonus Payable		1,515

E11-23

Situation	Appropriate accounting treatment
a.	Do not disclose.
b.	Describe the situation in a note to the financial statements.
c.	Record an expense and a liability based on estimated amounts.

E11-24
Requirement 1

Times-interest-earned ratio

	Cash	Pennington
Net Income	$ 26,070	$ 74,188
+ Income Tax Expense	+ 9,270	+ 27,080
+ Interest Expense	+ 300	+ 2,900
Total	$ 35,640	$ 104,168
÷ Interest Expense	÷ 300	÷ 2,900
Ratio for 2018	118.80	35.92

Requirement 2

Cash is better able to cover its interest expense.

Problems (Group A)

P11-25A

Requirements 1 and 2

Date	Accounts and Explanation	Debit	Credit
2018			
June 30			
a.	Interest Expense	17,325	
	Interest Payable ($210,000 × 9% × 11/12)		17,325
a.	*No journal entry needed to reclassify the current portion of long-term debt.*		
b.	Salary Expense	4,700	
	Employee Income Taxes Payable		910
	FICA—OASDI Taxes Payable (6.2% × $4,700)		291
	FICA—Medicare Taxes Payable (1.45% × $4,700)		68
	Salaries Payable		3,431
c.	Payroll Tax Expense	359	
	FICA—OASDI Taxes Payable (6.2% × $4,700)		291
	FICA—Medicare Taxes Payable (1.45% × $4,700)		68
d.	Unearned Rent Revenue	3,000	
	Rent Revenue ($7,200 × 5/12)		3,000

P11-25A, cont.
Requirements 1 and 2, cont.

Accounts Payable

	114,000 Beg. Bal.
	114,000 End Bal.

Interest Payable

	0 Beg. Bal.
	17,325 a.
	17,325 End Bal.

Salaries Payable

	0 Beg. Bal.
	3,431 b.
	3,431 End Bal.

Employee Income Taxes Payable

	0 Beg. Bal.
	910 b.
	910 End Bal.

FICA—OASDI Taxes Payable

	0 Beg. Bal.
	291 b.
	291 c.
	582 End Bal.

FICA—Medicare Taxes Payable

	0 Beg. Bal.
	68 b.
	68 c.
	136 End Bal.

Unearned Rent Revenue

	7,200 Beg. Bal.
d. 3,000	
	4,200 End Bal.
	210,000 Beg. Bal.
	210,000 End Bal.

P11-25A, cont.
Requirement 3

SEAL-N-SHIP Balance Sheet (Partial) June 30, 2018		
Liabilities		
Current Liabilities:		
Accounts Payable	$ 114,000	
Current Portion of Notes Payable	42,000	
Interest Payable	17,325	
Salaries Payable	3,431	
Employee Income Taxes Payable	910	
FICA—OASDI Taxes Payable	582	
FICA—Medicare Taxes Payable	136	
Unearned Rent Revenue	4,200	
Total Current Liabilities		$ 182,584

P11-26A
Requirement 1

Logan White
Payroll for the year ended December 31, 2018

	Calculation	Annual
Gross Pay:		
Salary	$13,600 × 12	$ 163,200
Bonus	$163,200 × 15%	24,480
Total Gross Pay		$ 187,680
Deductions:		
Federal Income Tax	($1,360 × 12) + $4,876	$ 21,196
State Income Tax	($150 × 12) + $60	1,860
FICA—OASDI	6.2% first $118,500	7,347
FICA—Medicare	1.45% × $187,680	2,721
Charity Fund	1% × $187,680	1,877
Life Insurance	$40 × 12	480
Total Deductions		35,481
Net Pay		$ 152,199

Requirement 2

Logan White
Employer Payroll Expense for the year ended December 31, 2018

	Calculation	Annual	
Total Gross Pay			$187,680
Employer Payroll Taxes:			
FICA—OASDI	6.2% first $118,500	7,347	
FICA—Medicare	1.45% × $187,680	2,721	
FUTA	0.6% × $7,000	42	
SUTA	5.4% × $7,000	378	
Total Employer Payroll Tax			10,488
Total Payroll Expense			$ 198,168

P11-26A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Salaries Expense	163,200	
	Bonus Expense	24,480	
	Employee Federal Income Taxes Payable		21,196
	Employee State Income Taxes Payable		1,860
	FICA—OASDI Taxes Payable		7,347
	FICA—Medicare Taxes Payable		2,721
	Charity Fund Payable		1,877
	Life Insurance Payable		480
	Cash		152,199

Requirement 4

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Payroll Tax Expense	10,488	
	FICA—OASDI Taxes Payable		7,347
	FICA—Medicare Taxes Payable		2,721
	Federal Unemployment Taxes Payable		42
	State Unemployment Taxes Payable		378

Requirement 5

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Employee Federal Income Taxes Payable	21,196	
	Employee State Income Taxes Payable	1,860	
	FICA—OASDI Taxes Payable ($7,347 + $7,347)	14,694	
	FICA—Medicare Taxes Payable ($2,721 + $2,721)	5,442	
	Charity Fund Payable	1,877	
	Life Insurance Payable	480	
	Federal Unemployment Taxes Payable	42	
	State Unemployment Taxes Payable	378	
	Cash		45,969

P11-27A

Date	Accounts and Explanation	Debit	Credit
2017			
Jan. 9	Computer Equipment	12,000	
	Notes Payable		12,000
29	Cash ($63,000 × ¼) + ($15,750 × 6%)	16,695	
	Accounts Receivable ($63,000 × ¾) + (47,250 × 6%)	50,085	
	Sales		63,000
	Sales Tax Payable ($63,000 × 6%)		3,780
Feb. 5	Sales Tax Payable	3,780	
	Cash		3,780
Jul. 9	Notes Payable	12,000	
	Interest Expense ($12,000 × 9% × 6/12)	540	
	Cash		12,540
Aug. 31	Merchandise Inventory	9,000	
	Notes Payable		9,000
Dec. 31	Warranty Expense (4% × $609,000)	24,360	
	Estimated Warranty Payable		24,360
31	Interest Expense ($9,000 × 10% × 4/12)	300	
	Interest Payable		300
2018			
Feb. 28	Notes Payable	9,000	
	Interest Payable	300	
	Interest Expense ($9,000 × 10% × 2/12)	150	
	Cash		9,450

P11-28A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 30	No entry required		
Jun. 30	Warranty Expense (2% × $350,000)	7,000	
	Estimated Warranty Payable		7,000
Jul. 28	Estimated Warranty Payable	5,500	
	Cash		5,500
Sep. 30	Estimated Loss from Lawsuit	80,000	
	Estimated Lawsuit Payable		80,000
Dec. 31	Warranty Expense (2% × $510,000)	10,200	
	Estimated Warranty Payable		10,200

Requirement 2

Estimated Warranty Payable

		7,000	Jun. 30
Jul. 28	5,500	10,200	Dec. 31
		11,700	End Bal.

P11-29A
Requirement 1

Interest Expense = $3,000 × 9% × 2/12 = $45

CALIFORNIA COMMUNICATIONS
Income Statement
Year Ended July 31, 2018

Net Sales Revenue		$ 21,800
Cost of Goods Sold		14,000
Gross Profit		7,800
Operating Expenses:		
Selling Expenses	720	
Administrative Expenses	1,650	
Total Operating Expenses		2,370
Operating Income		5,430
Other Income and (Expenses):		
Interest Expense	(45)	
Total Other Income and (Expenses)		(45)
Net Income before Income Tax Expense		5,385
Income Tax Expense		1,080
Net Income		$ 4,305

Requirement 2

Times-interest-earned ratio	
Net Income	$ 4,305
+ Income Tax Expense	+ 1,080
+ Interest Expense	+ 45
Total	$ 5,430
÷ Interest Expense	÷ 45
Ratio for 2018	120.67

Problems (Group B)

P11-30B
Requirements 1 and 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30			
a.	Interest Expense	18,150	
	Interest Payable ($198,000 × 10% × 11/12)		18,150
a.	*No journal entry needed to reclassify the current portion of long-term debt.*		
b.	Salary Expense	4,800	
	Employee Income Taxes Payable		920
	FICA—OASDI Taxes Payable (6.2% × $4,800)		298
	FICA—Medicare Taxes Payable (1.45% × $4,800)		70
	Salaries Payable		3,512
c.	Payroll Tax Expense	368	
	FICA—OASDI Taxes Payable (6.2% × $4,800)		298
	FICA—Medicare Taxes Payable (1.45% × $4,800)		70
d.	Unearned Rent Revenue	2,250	
	Rent Revenue ($5,400 × 5/12)		2,250

Accounts Payable

	118,000	Beg. Bal.
	118,000	End Bal.

Interest Payable

	0	Beg. Bal.
	18,150	a.
	18,150	End Bal.

Salaries Payable

	0	Beg. Bal.
	3,512	b.
	3,512	End Bal.

P11-30B, cont.
Requirements 1 and 2, cont.

Employee Income Taxes Payable

		0	Beg. Bal.
		920	b.
		920	End Bal.

FICA—OASDI Taxes Payable

		0	Beg. Bal.
		298	b.
		298	c.
		596	End Bal.

FICA—Medicare Taxes Payable

		0	Beg. Bal.
		70	b.
		70	c.
		140	End Bal.

Unearned Rent Revenue

		5,400	Beg. Bal.
d.	2,250		
		3,150	End Bal.

Long-Term Notes Payable

		198,000	Beg. Bal.
		198,000	End Bal.

P11-30B, cont.
Requirement 3

PROMPT SHIP Balance Sheet (Partial) June 30, 2018		
Liabilities		
Current Liabilities:		
Accounts Payable	$ 118,000	
Current Portion of Notes Payable	39,600	
Interest Payable	18,150	
Salaries Payable	3,512	
Employee Income Taxes Payable	920	
FICA—OASDI Taxes Payable	596	
FICA—Medicare Taxes Payable	140	
Unearned Rent Revenue	3,150	
Total Current Liabilities		$ 184,068

P11-31B
Requirement 1

Liam Wallace
Payroll for the year ended December 31, 2018

	Calculation	Annual
Gross Pay:		
Salary	$13,400 × 12	$ 160,800
Bonus	$160,800 ×5%	8,040
Total Gross Pay		168,840
Deductions:		
Federal Income Tax	($2,010 × 12) + $1,608	25,728
State Income Tax	($110 × 12) + $80	1,400
FICA—OASDI	6.2% first $118,500	7,347
FICA—Medicare	1.45% × $168,840	2,448
Charity Fund	2% × $168,840	3,377
Life Insurance	$15 × 12	180
Total Deductions		40,480
Net Pay		$ 128,360

P11-31B, cont.
Requirement 2

Liam Wallace Employer Payroll Expense for the year ended December 31, 2018	Calculation	Annual	
Gross Pay			$168,840
Employer Payroll Taxes:			
FICA—OASDI	6.2% first $118,500	7,347	
FICA—Medicare	1.45% × $168,840	2,448	
FUTA	0.6% × $7,000	42	
SUTA	5.4% × $7,000	378	
Total Employer Payroll Tax			10,215
Total Payroll Expense			$ 179,055

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Salaries Expense	160,800	
	Bonus Expense	8,040	
	Employee Federal Income Taxes Payable		25,728
	Employee State Income Taxes Payable		1,400
	FICA—OASDI Taxes Payable		7,347
	FICA—Medicare Taxes Payable		2,448
	Charity Fund Payable		3,377
	Life Insurance Payable		180
	Cash		128,360

P11-31B, cont.
Requirement 4

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Payroll Tax Expense	10,215	
	FICA—OASDI Taxes Payable		7,347
	FICA—Medicare Taxes Payable		2,448
	Federal Unemployment Taxes Payable		42
	State Unemployment Taxes Payable		378

Requirement 5

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Employee Federal Income Taxes Payable	25,728	
	Employee State Income Taxes Payable	1,400	
	FICA—OASDI Taxes Payable ($7,347 + $7,347)	14,694	
	FICA—Medicare Taxes Payable ($2,448 + $2,448)	4,896	
	Charity Fund Payable	3,377	
	Life Insurance Payable	180	
	Federal Unemployment Taxes Payable	42	
	State Unemployment Taxes Payable	378	
	Cash		50,695

P11-32B

Date	Accounts and Explanation	Debit	Credit
2017			
Jan. 9	Computer Equipment	7,000	
	Notes Payable		7,000
29	Cash ($68,000 × ¼) + ($17,000 × 6%)	18,020	
	Accounts Receivable ($68,000 × ¾) + (51,000 × 6%)	54,060	
	Sales		68,000
	Sales Tax Payable ($68,000 × 6%)		4,080
Feb. 5	Sales Tax Payable	4,080	
	Cash		4,080
Jul. 9	Notes Payable	7,000	
	Interest Expense ($7,000 × 8% × 6/12)	280	
	Cash		7,280
Aug. 31	Merchandise Inventory	3,000	
	Notes Payable		3,000
Dec. 31	Warranty Expense (2% × $609,000)	12,180	
	Estimated Warranty Payable		12,180
31	Interest Expense ($3,000 × 10% × 4/12)	100	
	Interest Payable		100
2018			
Feb. 28	Notes Payable	3,000	
	Interest Payable	100	
	Interest Expense ($3,000 × 10% × 2/12)	50	
	Cash		3,150

P11-33B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 30	No entry required		
Jun. 30	Warranty Expense (3% × $390,000)	11,700	
	Estimated Warranty Payable		11,700
Jul. 28	Estimated Warranty Payable	6,300	
	Cash		6,300
Sep. 30	Estimated Loss from Lawsuit	90,000	
	Estimated Lawsuit Payable		90,000
Dec. 31	Warranty Expense (3% × $520,000)	15,600	
	Estimated Warranty Payable		15,600

Requirement 2

Estimated Warranty Payable			
		11,700	Jun. 30
Jul. 28	6,300	15,600	Dec. 31
		21,000	End Bal.

P11-34B
Requirement 1

Interest Expense = $6,000 × 3% × 2/12 = $30

VERMONT COMMUNICATIONS
Income Statement
Year Ended July 31, 2018

Net Sales Revenue		$ 26,500
Cost of Goods Sold		12,200
Gross Profit		14,300
Operating Expenses:		
Selling Expenses	690	
Administrative Expenses	1,550	
Total Operating Expenses		2,240
Operating Income		12,060
Other Income and (Expenses):		
Interest Expense	(30)	
Total Other Income and (Expenses)		(30)
Net Income before Income Tax Expense		12,030
Income Tax Expense		2,410
Net Income		$ 9,620

Requirement 2

Times-interest-earned ratio

Net Income	$ 9,620
+ Income Tax Expense	+ 2,410
+ Interest Expense	+ 30
Total	$ 12,060
÷ Interest Expense	÷ 30
Ratio for 2018	402.00

Excel Skill Problem

P11-35

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P11-36
Requirements 1-5

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 1	Cash	15,000.00	
	Notes Payable		15,000.00
30	Salaries Expense	3,000.00	
	FICA—OASDI Taxes Payable ($3,000 × 6.2%)		186.00
	FICA—Medicare Taxes Payable ($3,000 × 1.45%)		43.50
	Employee Income Taxes Payable ($3,000 × 25%)		750.00
	Employee Health Insurance Payable		250.00
	Salaries Payable		1,770.50
30	Payroll Tax Expense	409.50	
	FICA—OASDI Taxes Payable ($3,000 × 6.2%)		186.00
	FICA—Medicare Taxes Payable ($3,000 × 1.45%)		43.50
	Federal Unemployment Taxes Payable ($3,000 × 0.6%)		18.00
	State Unemployment Taxes Payable ($3,000 × 5.4%)		162.00
Oct. 15	Salaries Payable	1,770.50	
	Cash		1,770.50
15	FICA—OASDI Taxes Payable ($186.00 + $186.00)	372.00	
	FICA—Medicare Taxes Payable ($43.50 + $43.50)	87.00	
	Federal Unemployment Taxes Payable	18.00	
	State Unemployment Taxes Payable	162.00	
	Employee Income Taxes Payable	750.00	
	Employee Health Insurance Payable	250.00	
	Cash		1,639.00
Dec. 31	Interest Expense ($15,000 × 6% × 4/12)	300.00	
	Interest Payable		300.00
2020			
Sep. 1	Notes Payable	15,000.00	
	Interest Payable	300.00	
	Interest Expense ($15,000 × 6% × 8/12)	600.00	
	Cash		15,900.00

Critical Thinking

Tying It All Together Case 11-1

Requirement 1
Contingent liabilities are potential liabilities that depend upon a future event.

Requirement 2
In the notes to the financial statements, UnitedHealth Group Incorporated states the company is frequently made party to a variety of legal actions including medical malpractice and employment claims. The company estimates the probable costs resulting from these matters as contingent liabilities.

Requirement 3
Contingent liabilities that are either reasonably possible or probable but cannot be estimated should be disclosed in the notes to the financial statements.

Requirement 4
UnitedHealth Group Incorporated states that the company cannot reasonably estimate the amount of loss associated with the California Claims Processing Matter. Therefore, the company does not need to record a liability on its balance sheet but should instead disclose of the matter in its notes, which it does.

Decision Case 11-1
Requirement 1

A supervisor can enter a fictitious employee on a weekly time sheet, submit the time sheet to the company, and receive and keep the paycheck. The supervisor may forge a W-4 form with a fake signature and use that same signature to endorse the check. Alternatively, a supervisor could hire a real person, say a relative, who will not actually work, but will receive paychecks and kick back the money to the supervisor.

Also, a supervisor can keep submitting hours worked for a worker who has been terminated. The supervisor can take the paycheck made payable to that employee and keep it for personal use.

Requirement 2

To safeguard against the company fraud identified in Requirement 1, Beavers (or a home office employee) should make unscheduled visits to construction sites and distribute payroll checks. If a paycheck is payable to an employee not present to receive it, Beavers can ask other workers if the absent person has been working on that job. If the workers say no, Beavers will have uncovered a possible fraud.
The separation of hiring and terminating employees from the duty of distributing paychecks would safeguard the company against fraud. However, this separation of duties is not customary in the construction business because it is more economical for supervisors to distribute paychecks on the job site than for all the workers to come to the home office to receive their pay.

Decision Case 11-2
Requirement 1

A company would prefer not to disclose its contingent liabilities because they cast a shadow on the business and create a negative impression. Additionally, they reveal possible future problems that could negatively impact the company's financial position and hamper the company's ability to attract investors or borrow money. In addition, disclosure about a lawsuit can sometimes jeopardize the outcome of a lawsuit. If the plaintiff or the jury sees this information, they may interpret it to mean the defendant is admitting blame for the situation and expects to lose the lawsuit.

Requirement 2

A contingent liability creates risk for a company. If the contingent liability is not reported, the bank may view the company as low-risk. This may lead the bank to loan money at low interest rates and with easy payment terms. With knowledge of the contingent liability, the bank might not have made the loan at all. Or the bank might have required a higher interest rate or more stringent payment terms. In the most extreme case, a bank may be harmed if the company cannot repay its loan—a loan that had been granted on the basis of incomplete or misleading information.

Requirement 3

Reporting of contingent liabilities often depends on subjective judgment about whether an outcome is remote, reasonably possible, or probable. A company may have strong incentive to skew judgment in one direction or another. The ethical tightrope consists in acting in good faith and not deliberately misrepresenting what are often complex situations, while at the same time, exercising reasonable judgment, often in the face of intense pressure to distort the facts.

Ethical Issue 11-1
Requirement 1

The contractor must pay "self-employment tax" which represents both the employer's and the employee's share of normal FICA taxes. In addition, because no federal income taxes were withheld during the year, the contractors have to come up with quarterly payments of expected taxes due. This is a heavy burden on many lower-wage workers who are treated as independent contractors.

Requirement 2

Businesses may take aggressive positions on tax issues, and those positions may be tested in court. It is unethical if a business knowingly treats workers as independent contractors when they are aware that those workers should be treated as employees. This is the moral equivalent of lying. Contractors are hurt because they pay a heavier share of taxes, and do not receive employee benefits such as medical insurance.

Financial Statement Case 11-1
Requirement 1

TARGET CORPORATION Balance Sheet (partial) January 30, 2016 (In millions)		
Liabilities		
Current Liabilities:		
Accounts payable	$ 7,418	
Accrued and other current liabilities	4,236	
Current portion of long-term debt and other borrowings	815	
Liabilities of discontinued operations	153	
Total current liabilities		$ 12,622

Requirement 2

Times-Interest-Earned Ratio

(In millions)	January 30, 2016
Net Income	$ 3,363
+ Income Tax Expense	+ 1,602
+ Interest Expense	+ 607
Total	$ 5,572
÷ Interest Expense	÷ 607
Target's Ratio	9.18

Target's times-interest-earned ratio at 9.18 is more than twice Kohl's ratio of 4.23. This indicates Target can cover its interest expense better than Kohl's.

Communication Activity 11-1

How businesses record or don't record contingent liabilities is based on one of three likelihoods of the event occurring in the future: remote, reasonably possible, or probable.

A contingency that is remote has little chance of the event occurring in the future. If a contingency is remote, the company does not need to record a liability and does not need to disclose it in the notes to the financial statements.

Contingencies that are reasonably possible have a higher chance of occurring but are not likely. A reasonably possible contingency should be described in the notes to the financial statements.

If a contingency is probable, it means that the future event is likely to occur. Only contingencies that are probable *and* can be estimated are recorded as a liability and a loss or expense is accrued.

Contingencies that are probable but *cannot* be estimated are disclosed in the notes to the financial statements. A liability is not recorded because the amount of the contingency cannot be estimated.

Long-Term Liabilities 12

Should the Business Take on Additional Debt?

Sophie Animations Studios, Inc. specializes in creating animated feature films for children and young-minded adults. The studio was started by founders Steve Lasseter and Lee Bird and has grown to produce many notable films. The corporation's stock is currently sold on a national stock exchange, and the company is widely respected for its consistent earnings each year.

The corporation plans on expanding its existing operations by building a new studio in Canada that will produce short movies and TV specials. In order to fund this expansion, the corporation is considering several options. One option is for the corporation to issue additional stock to raise the necessary cash. Another option is for the corporation to take on additional debt. As majority stockholders, Steve and Lee have expressed their concern over issuing additional shares of stock. The stockholders are concerned that the additional stock will decrease their ownership percentage in the corporation and also cause the market value of the stock to decrease. Due to these concerns, the corporation has decided that the best option would be to explore ways to secure the cash needed for expansion by taking on additional debt.

Sophie Animations Studios is currently evaluating different types of long-term liability options such as long-term notes payable and mortgages payable. These debts will most likely be secured by the studio building and will offer a reasonable interest rate and time period for repayment. In addition, Sophie Animations Studios is considering a special type of long-term liability, called a *bonds payable*. Bonds payable are issued on a bond market and typically provides a larger cash inflow than notes payable and mortgages payable do. In addition, bonds payable also often provide a longer time period for repayment, some even lasting for as long as 100 years. Each of these long-term liabilities is unique and offers advantages and disadvantages that Sophie Animations Studios needs to consider before it can begin the expansion.

Why Issue a 100-Year Bond Payable?

On July 21, 1993, **The Walt Disney Company** issued a long-term liability, specifically called a *bonds payable*, that would be payable in 100 years! These bonds were issued with an annual interest rate of 7.55%, and the principal of approximately $300 million was scheduled to be repaid in the year 2093. The Walt Disney Company is well known as an international family entertainment and media enterprise that includes broadcast networks, parks and resorts, the Walt Disney studios, consumer products, and interactive technology and games. Why would the Walt Disney Company issue a debt that wouldn't be paid back for 100 years? How are these types of long-term liabilities accounted for and reported on the balance sheet? In this chapter, you learn why companies might issue bonds payable and also how to account for other long-term liabilities, such as long-term notes payable and mortgages payable.

Chapter 12 Learning Objectives

1. Journalize transactions for long-term notes payable and mortgages payable
2. Describe bonds payable
3. Journalize transactions for bonds payable and interest expense using the straight-line amortization method
4. Journalize transactions to retire bonds payable
5. Report liabilities on the balance sheet
6. Use the debt to equity ratio to evaluate business performance
7. Use time value of money to compute present value and future value (Appendix 12A)
8. Journalize transactions for bonds payable and interest expense using the effective-interest amortization method (Appendix 12B)

HOW ARE LONG-TERM NOTES PAYABLE AND MORTGAGES PAYABLE ACCOUNTED FOR?

Learning Objective 1
Journalize transactions for long-term notes payable and mortgages payable

You have learned that **long-term liabilities** are liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Both long-term notes payable and mortgages payable are common long-term liabilities.

Long-term Liability
A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.

Long-term Notes Payable

Long-term notes payable are typically reported in the long-term liabilities section of the balance sheet. You learned about the current portion of long-term notes payable in a previous chapter. Now, let's focus on the long-term portion of the notes payable and the payments made according to the note contract.

Recall that most long-term notes payable are paid in installments. The *current portion of notes payable* is the principal amount that will be paid within one year—a current liability. The remaining portion is long-term. For example, Smart Touch Learning signed a $20,000 note payable on December 31, 2018. The note will be paid over four years with payments of $5,000 plus 6% interest due each December 31, beginning December 31, 2019. Remember that the current portion of the note, the amount due December 31, 2019, $5,000, is considered a current liability at December 31, 2018. We record the issuance of the note on December 31, 2018, in the following manner:

A↑	=	L↑	+	E
Cash↑		Notes Payable↑		

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Cash	20,000	
	Notes Payable		20,000
	Received cash in exchange for a 4-year, 6% note.		

Amortization Schedule
A schedule that details each loan payment's allocation between principal and interest and the beginning and ending loan balances.

On December 31, 2019, Smart Touch Learning will make a $5,000 principal payment plus interest. Exhibit 12-1 shows an **amortization schedule** for the notes payable. An amortization schedule details each loan payment's allocation between principal and interest and also the beginning and ending balances of the loan. Using the calculation for interest

that you have already learned, Smart Touch Learning will calculate interest expense as beginning balance × interest rate × time. The total cash payment is the principal payment plus interest expense. Notice that at the end of the four years, Smart Touch Learning will have paid total interest of $3,000. Also notice that the interest expense decreases each year, as this expense is based on the principal, which is decreasing with each installment payment.

Exhibit 12-1 | Long-term Notes Payable Amortization Schedule

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/31/2018					$ 20,000
12/31/2019	$ 20,000	$ 5,000	$ 1,200	$ 6,200	15,000
12/31/2020	15,000	5,000	900	5,900	10,000
12/31/2021	10,000	5,000	600	5,600	5,000
12/31/2022	5,000	5,000	300	5,300	0
Total		$ 20,000	$ 3,000	$ 23,000	

Beginning balance − Principal payment = $20,000 − $5,000 = $15,000

Beginning balance × Interest rate × Time = $20,000 × 0.06 × 1 year = $1,200

Principal payment + Interest expense = $5,000 + $1,200 = $6,200

Assume it's now December 31, 2019, and Smart Touch Learning must make its first installment payment of $5,000 principal plus interest on the note. The company's accounting clerk will record the following entry:

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Notes Payable	5,000	
	Interest Expense	1,200	
	Cash		6,200
	Paid principal and interest payment.		

$$\frac{\mathbf{A}\downarrow}{\text{Cash}\downarrow} = \frac{\mathbf{L}\downarrow}{\text{Notes Payable}\downarrow} + \frac{\mathbf{E}\downarrow}{\text{Interest Expense}\uparrow}$$

After the December 31, 2019, entry, Smart Touch Learning owes $15,000 ($20,000 original note amount minus the $5,000 principal paid on December 31, 2019). The company will record similar entries for the three remaining payments using the amounts calculated in the amortization schedule.

Mortgages Payable

Mortgages payable include the borrower's promise to transfer the legal title to specific assets if the mortgage isn't paid on schedule. Mortgages payable are a type of long-term notes payable that are secured with specific assets. Like long-term notes payable, the total mortgages payable amount has a portion due within one year (current) and a portion that is due more than one year from the balance sheet date.

Mortgages Payable
Long-term debts that are backed with a security interest in specific property.

Commonly, mortgages specify a monthly payment of principal and interest to the lender (usually a bank). The most common type of mortgage is on property—for example, a mortgage on your home. Let's review an example.

Assume that on December 31, 2018, Smart Touch Learning purchases a building for $150,000, paying $49,925 in cash and signing a 30-year mortgage for $100,075, taken out at 6% interest that is payable in $600 monthly payments, which includes principal and interest, beginning January 31, 2019. The following entry is used to record this acquisition:

A↑	=	L↑	+	E
Building↑ Cash↓	=	Mortgages Payable↑		

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Building	150,000	
	Mortgages Payable		100,075
	Cash		49,925
	Purchased building with a mortgage payable and cash payment.		

A partial amortization schedule for 2018 and 2019 is shown in Exhibit 12-2.

Beginning balance × Interest rate × Time
= $100,075 × 0.06 × 1/12 = $500.38

Total payment − Interest expense
= $600.00 − $500.38 = $99.62

Exhibit 12-2 | Mortgages Payable Amortization Schedule

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/31/2018					$ 100,075.00
01/31/2019	$ 100,075.00	$ 99.62	$ 500.38	$ 600.00	99,975.38
02/28/2019	99,975.38	100.12	499.88	600.00	99,875.26
03/31/2019	99,875.26	100.62	499.38	600.00	99,774.64
04/30/2019	99,774.64	101.13	498.87	600.00	99,673.51
05/31/2019	99,673.51	101.63	498.37	600.00	99,571.88
06/30/2019	99,571.88	102.14	497.86	600.00	99,469.74
07/31/2019	99,469.74	102.65	497.35	600.00	99,367.09
08/31/2019	99,367.09	103.16	496.84	600.00	99,263.93
09/30/2019	99,263.93	103.68	496.32	600.00	99,160.25
10/31/2019	99,160.25	104.20	495.80	600.00	99,056.05
11/30/2019	99,056.05	104.72	495.28	600.00	98,951.33
12/31/2019	98,951.33	105.24	494.76	600.00	98,846.09
Total		$ 1,228.91	$ 5,971.09	$ 7,200.00	

Beginning balance − Principal payment
= $100,075.00 − $99.62 = $99,975.38

Notice that as time goes by the portion of the payment applied to principal increases and interest expense decreases.

We can confirm the interest calculations provided in the amortization table. So, for the first payment on the interest is calculated as $100,075.00 × 6% × 1/12, or $500.38. The principal of $99.62 is the difference between the monthly payment of $600.00 and the interest expense of $500.38 ($600.00 − $500.38 = $99.62). The $99.62 reduces the mortgages payable from $100,075.00 to $99,975.38 ($100,075.00 − $99.62 = $99,975.38). So, after reviewing the amortization schedule, Smart Touch Learning records the first mortgage payment as follows:

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 31	Mortgages Payable	99.62	
	Interest Expense	500.38	
	Cash		600.00
	Paid principal and interest payment.		

A↓ Cash↓ = L↓ Mortgages Payable↓ + E↓ Interest Expense↑

Each mortgage payment will be recorded in a similar journal entry, using the amortization schedule amounts.

Take a moment to review Exhibits 12-1 and 12-2. **In Exhibit 12-1, the principal payment stays the same and the total payment changes. In Exhibit 12-2, the principal payment varies while the total payment stays the same. Long-term liabilities can be structured either way—with an equal principal payment or equal total payment.** One thing that always changes, though, is the amount of interest expense each period. The amount of interest expense is always calculated on the beginning balance of the loan, and because the beginning balance of the loan is decreasing, the amount of interest expense also decreases.

What is the difference between the mortgages payable amortization schedule and the long-term notes payable amortization schedule?

Try It!

On January 1, 2018, Fox Corporation signed an $80,000, four-year, 4% note. The loan required Fox to make payments annually on December 31 of $20,000 principal plus interest.

1. Journalize the issuance of the note on January 1, 2018.
2. Journalize the first payment on December 31, 2018.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12-1 and S12-2. MyAccountingLab

WHAT ARE BONDS?

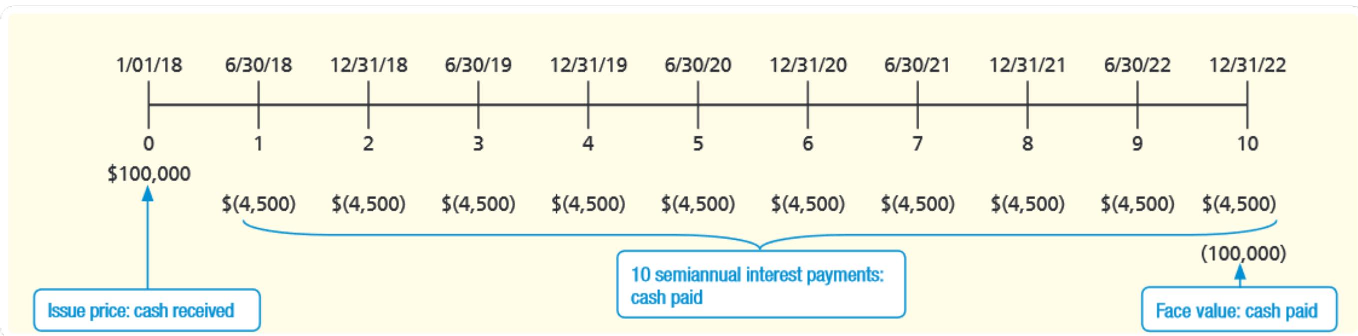
Learning Objective 2
Describe bonds payable

Large companies need large amounts of money to finance their operations. They may take out long-term loans from banks and/or issue bonds payable to the public to raise the money. **Bonds payable** are long-term debts issued to multiple lenders called bondholders, usually in increments of $1,000 per bond. For example, a company could borrow $100,000 from one lender (the bank), or it could issue 100 bonds payable, each at $1,000, to 100 different lenders. By issuing bonds payable, companies can borrow millions of dollars from thousands of investors rather than depending on a loan from one single bank or lender. Each investor can buy a specified amount of the company's bonds.

Bond Payable
A long-term debt issued to multiple lenders called bondholders, usually in increments of $1,000 per bond.

Each bondholder gets a bond certificate that shows the name of the company that borrowed the money, exactly like a note payable. The certificate states the face value, which is the amount of the bond issue. The bond's face value is also called *maturity value*, *principal*, or *par value*. The company must then pay each bondholder the face value amount at a specific future date, called the maturity date.

People buy (invest in) bonds to earn interest. The bond certificate states the interest rate that the company will pay and the dates the interest is due, generally semiannually (twice per year). For example, a five-year, 9% bond issued at a face value of \$100,000 on January 1, 2018, will pay 10 semiannual interest payments of \$4,500 (\$100,000 × 0.09 × 6/12) in addition to the face value payment at the maturity date. The cash flow pattern for this bond is as follows:



Face Value
The amount a borrower must pay back to the bondholders on the maturity date.

Exhibit 12-3 shows a bond certificate issued by Smart Touch Learning. Review the following bond fundamentals in the exhibit:

- **Face value**—The amount the borrower must pay back to the bondholders on the maturity date (also called *maturity value*, *principal amount*, or *par value*).

Exhibit 12-3 | **Bond Certificate**

- **Maturity date**—The date on which the borrower must pay the principal amount to the bondholders.
- **Stated interest rate**—The interest rate that determines the amount of cash interest the borrower pays and the investor receives each year (also called *face rate*, *coupon rate*, or *nominal rate*).

Stated Interest Rate
The interest rate that determines the amount of cash interest the borrower pays and the investor receives each year.

Types of Bonds

There are various types of bonds, including the following:

- **Term bonds**—These bonds all mature at the same specified time. For example, $100,000 of term bonds may all mature five years from today.
- **Serial bonds**—Such bonds mature in installments at regular intervals. For example, a $500,000, five-year serial bond may mature in $100,000 annual installments over a five-year period.
- **Secured bonds**—These bonds give the bondholder the right to take specified assets of the issuer if the issuer fails to pay principal or interest.
- **Debentures**—Such bonds are unsecured bonds that are not backed by assets. They are backed only by the credit worthiness of the bond issuer.

Term Bonds
Bonds that all mature at the same time.

Serial Bonds
Bonds that mature in installments at regular intervals.

Secured Bonds
Bonds that give bondholders the right to take specified assets of the issuer if the issuer fails to pay principal or interest.

Debentures
Unsecured bonds backed only by the credit worthiness of the bond issuer.

Bond Prices

A bond can be issued at any price agreed upon by the issuer and the bondholders. A bond can be issued at any of the following:

- **Face value**—Occurs when a bond is issued at face value. Example: A $1,000 bond issued for $1,000.
- **Discount**—A **discount on bonds payable** occurs when the issue price is less than face value. Example: A $1,000 bond issued for $980. The discount is $20 ($1,000 − $980).
- **Premium**—A **premium on bonds payable** occurs when the issue price is above face value. Example: A $1,000 bond issued for $1,015. The premium is $15 ($1,015 − $1,000).

Discount on Bonds Payable
Occurs when a bond's issue price is less than face value.

Premium on Bonds Payable
Occurs when a bond's issue price is more than face value.

The issue price of a bond does not affect the required payment at maturity. In all of the preceding cases, the company must pay the face value of the bonds at the maturity date stated on the face of the bond.

After a bond is issued, investors may buy and sell it through the bond market just as they buy and sell stocks through the stock market. The most well-known bond market is the NYSE Bonds, which lists several thousand bonds.

Bond prices are quoted as a percentage of face value. For example:

- a $1,000 bond quoted at 100 is bought or sold for 100% of face value, $1,000 ($1,000 × 1.00).
- a $1,000 bond quoted at 88.375 is bought or sold for 88.375% of face value, $883.75 ($1,000 × 0.88375).
- a $1,000 bond quoted at 101.5 is bought or sold for 101.5% of face value, $1,015 ($1,000 × 1.015).

The issue price of a bond determines the amount of cash the company receives when it issues the bond. In all cases, the company must pay the bond's face value to retire it at the maturity date.

Exhibit 12-4 (on the next page) shows example price information for the bonds of Smart Touch Learning. On this particular day, 12 of Smart Touch Learning's 9% bonds maturing in 2021 (indicated by 21) were traded. The bonds' highest price on this day was $795 ($1,000 × 0.795). The lowest price of the day was $784.50 ($1,000 × 0.7845). The closing price (last sale of the day) was $795.

Exhibit 12-4 | **Bond Price Information**

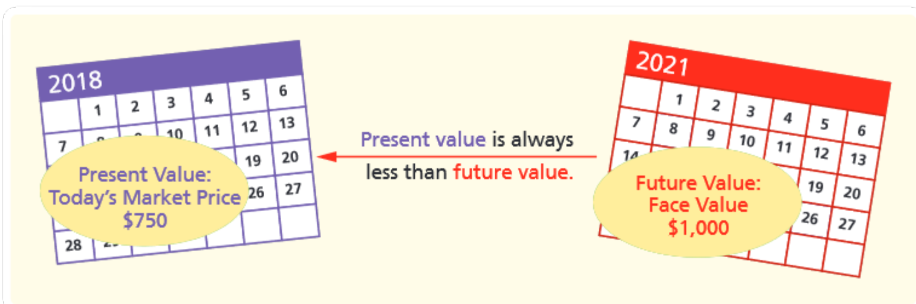
Bonds	Volume	High	Low	Close
SMT 9% of 21	12	79.5	78.45	79.5

Present Value and Future Value

Time Value of Money
Recognition that money earns interest over time.

Money earns interest over time, a fact called the **time value of money**. Appendix 12A at the end of this chapter covers the time value of money in detail.

Let's see how the time value of money affects bond prices. Assume that a $1,000 bond reaches maturity three years from now and carries no interest. Would you pay $1,000 to purchase this bond? No, because paying $1,000 today to receive $1,000 later yields no interest on your investment. How much would you pay today in order to receive $1,000 in three years? The answer is some amount less than $1,000. Suppose $750 is a fair price. By investing $750 now to receive $1,000 later, you will earn $250 over the three years. The diagram that follows illustrates the relationship between a bond's price (present value) and its maturity amount (future value).



Present Value
The value of an investment today.

Future Value
The value of an investment at the end of a specific time frame.

The amount that a person would invest *at the present time* is called the **present value**. The present value is the bond's market price. In our example, $750 is the present value (market price of the bond), and the $1,000 face value to be received in three years is the **future value**, the value of the investment at a specific date in the future. We show how to compute the present value and future value in Appendix 12A.

Bond Interest Rates

Bonds are sold at their market price (issue price on the date the bonds are first sold), which is the present value of the interest payments the bondholder will receive while holding the bond plus the present value of the bond principal paid at the end of the bond's life. Two interest rates work together to set the price of a bond:

- The stated interest rate determines the amount of cash interest the borrower pays each year. The stated interest rate is printed on the bond and *does not change* from year to year. For example, Smart Touch Learning's 9% bonds payable have a stated interest rate of 9% (see Exhibit 12-3). Therefore, Smart Touch Learning pays $90 of interest annually on each $1,000 bond. The dollar amount of interest paid is not affected by the issue price of the bond.

- The **market interest rate** (also known as the *effective interest rate*) is the rate that investors demand to earn for loaning their money. The market interest rate *varies* constantly. A company may issue bonds with a stated interest rate that differs from the market interest rate, due to the time gap between the time the bonds were printed (engraved) showing the stated rate and the actual issuance of the bonds.

Market Interest Rate
The interest rate that investors demand in order to loan their money.

Smart Touch Learning may issue its 9% bonds when the market rate has risen to 10%. Will the Smart Touch Learning bonds attract investors in this market? No, because investors can earn 10% on other bonds. Therefore, investors will purchase Smart Touch Learning bonds only at a price *less* than face value. The difference between the lower price and the bonds' face value is a *discount* that will allow the investor to earn 10%, even though Smart Touch Learning's interest checks will be paid at the stated rate of 9%. The difference between what is paid for the bond (less than $1,000) and the bond principal of $1,000 is the interest rate difference between 9% and 10% over the life of the bond.

On the other hand, if the market interest rate is 8%, Smart Touch Learning's 9% bonds will be so attractive that investors will pay more than face value for them because investors will receive more in interest payments than expected. The difference between the higher price and face value is a *premium*. Exhibit 12-5 shows how the stated interest rate and the market interest rate work together to determine the price of a bond.

Exhibit 12-5 | **Interaction Between Stated Interest Rate, Market Rate, and Price of Bond**

Example: Bond with a Stated Interest Rate of 9%

Bond's Stated Interest Rate		Market Interest Rate		Issue Price of Bonds Payable
9%	=	9%	→	Face value of the bond
9%	<	10%	→	Discount (price below face value)
9%	>	8%	→	Premium (price above face value)

Issuing Bonds Versus Issuing Stock

Borrowing by issuing bonds payable carries a risk: The company may be unable to pay off the bonds and the related interest. Why do companies borrow instead of issuing stock? **Debt is a less expensive source of capital than stock, and bonds do not affect the percentage of ownership of the corporation.** Companies face the following decision: How shall we finance a new project—with bonds or with stock?

Why would a corporation issue bonds payable instead of issuing stock?

Suppose Smart Touch Learning has net income of $300,000 and 100,000 shares of common stock outstanding before it begins a new project. Smart Touch Learning needs $500,000 for the project, and the company is considering two plans:

- Plan 1 is to borrow $500,000 at 10% (issue $500,000 of 10% bonds payable).
- Plan 2 is to issue 50,000 shares of common stock for $500,000.

Smart Touch Learning management believes the new cash can be used to increase income before interest and taxes by $200,000 each year. The company estimates income tax expense to be 40%. Exhibit 12-6 (on the next page) shows the advantage of borrowing as it relates to earnings per share.

Exhibit 12-6 | **Issuing Bonds Payable Versus Issuing Common Stock**

	Plan 1: Issue $500,000 of 10% Bonds Payable		Plan 2: Issue $500,000 of Common Stock	
Net income before new project		$ 300,000		$ 300,000
Expected income on the new project before interest and income tax expenses	$ 200,000		$ 200,000	
Less: Interest expense ($500,000 × 0.10)	50,000		0	
Project income before income tax	150,000		200,000	
Less: Income tax expense (40%)	60,000		80,000	
Project net income		90,000		120,000
Net income with new project		$ 390,000		$ 420,000
Earnings per share with new project:				
Plan 1 ($390,000 / 100,000 shares)		$ 3.90		
Plan 2 ($420,000 / 150,000 shares)				$ 2.80

The earnings per share of stock is higher if Smart Touch Learning issues bonds. If all goes well, the company can earn more on the new project ($90,000) than the interest it pays on the bonds ($50,000). Earning more income on borrowed money than the related interest expense is called **financial leverage**. It is widely used to increase earnings per share of common stock. Notice that, even though net income is higher under Plan 2, the earnings per share is lower. Why? Because the earnings must be shared among 50,000 more shares of stock.

Financial Leverage
Occurs when a company earns more income on borrowed money than the related interest expense.

Borrowing can increase the earnings per share, but borrowing has its disadvantages. Debts must be paid during unprofitable years as well as profitable years. A company might not have enough cash flow to make the interest payment, thereby defaulting on the debt. Unlike cash dividends, which are optional payments to stockholders, the interest payment on bonds payable is required. Without the cash necessary to make the interest payment, a company could have to declare bankruptcy.

Try It!

Determine whether the following bonds payable will be issued at face value, at a premium, or at a discount:

3. A 10% bonds payable is issued when the market interest rate is 8%.

4. A 10% bonds payable is issued when the market interest rate is 10%.

5. A 10% bonds payable is issued when the market interest rate is 12%.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12-3 and S12-4. MyAccountingLab

HOW ARE BONDS PAYABLE ACCOUNTED FOR USING THE STRAIGHT-LINE AMORTIZATION METHOD?

Learning Objective 3
Journalize transactions for bonds payable and interest expense using the straight-line amortization method

The basic journal entry to record the issuance of bonds payable debits Cash and credits Bonds Payable. As noted previously, a company may issue bonds, a long-term liability, at *face value*, at a *discount*, or at a *premium*. We begin with the simplest case—issuing bonds payable at face value.

Issuing Bonds Payable at Face Value

Smart Touch Learning has $100,000 of 9% bonds payable that mature in five years. The company issues these bonds at face value on January 1, 2018. The issuance entry is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	100,000	
	Bonds Payable		100,000
	Issued bonds at face value.		

A↑ = L↑ + E
Cash↑ = Bonds Payable↑

Smart Touch Learning, the borrower, makes this one-time journal entry to record the receipt of cash and issuance of bonds payable. Semiannual interest payments occur each June 30 and December 31. Smart Touch Learning's first semiannual interest payment is journalized as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($100,000 × 0.09 × 6/12)	4,500	
	Cash		4,500
	Paid semiannual interest on bonds payable.		

A↓ = L + E↓
Cash↓ = Interest Expense↑

Each semiannual interest payment follows this same pattern.

Issuing Bonds Payable at a Discount

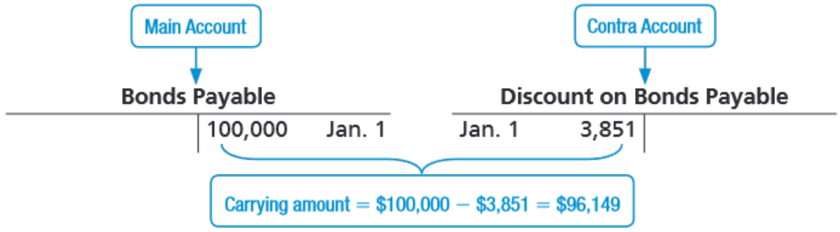
Now let's see how to issue bonds payable at a discount. This is one of the most common situations.

We know that market conditions may force a company such as Smart Touch Learning to accept a discounted price for its bonds. Suppose Smart Touch Learning issues $100,000 of its 9%, five-year bonds that pay interest semiannually when the market interest rate is 10%. The market price of the bonds drops to 96.149, which means 96.149% of face value. Smart Touch Learning receives $96,149 ($100,000 × 0.96149) at issuance and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	96,149	
	Discount on Bonds Payable ($100,000 – $96,149)	3,851	
	Bonds Payable		100,000
	Issued bonds at a discount.		

A↑ = L↑ + E
Cash↑ = Bonds Payable↑ Discount on Bonds Payable↑

After posting, the bond accounts have the following balances:



Carrying Amount of Bonds
A bond payable *minus* the discount account current balance or *plus* the premium account current balance.

Discount on Bonds Payable is a contra account to Bonds Payable. Bonds Payable *minus* the discount gives the **carrying amount of bonds** (also known as *carrying value*). Smart Touch Learning would report these bonds payable on the balance sheet as follows immediately after issuance:

Long-term Liabilities:		
Bonds Payable	$100,000	
Less: Discount on Bonds Payable	(3,851)	$96,149

Interest Expense on Bonds Payable Issued at a Discount

In this case, we see that a bond's stated interest rate differs from the market interest rate. The market rate was 10% when Smart Touch Learning issued its 9% bonds. This 1% interest rate difference created the $3,851 discount on the bonds. Smart Touch Learning needed to offer this discount because investors were willing to pay only $96,149 for the $100,000, 9% bonds when they could earn 10% on other bonds.

Smart Touch Learning borrowed $96,149 but still must pay $100,000 when the bonds mature five years later. What happens to the $3,851 discount? The discount is additional interest expense to Smart Touch Learning. The discount raises Smart Touch Learning's true interest expense on the bonds to the market interest rate of 10%. The discount becomes interest expense for Smart Touch Learning through a process called *amortization*, the gradual reduction of an item over time.

Straight-Line Amortization of Bond Discount

Straight-Line Amortization Method
An amortization method that allocates an equal amount of bond discount or premium to each interest period over the life of the bond.

We can amortize a bond discount by dividing it into equal amounts for each interest period. This is called the **straight-line amortization method**. It works very much like the straight-line depreciation method we discussed in the Plant Assets chapter. In our example, the initial discount is $3,851 and there are 10 semiannual interest periods during the bonds' five-year life (5 year life × 2 interest payments per year). Therefore, 1/10 of the $3,851 bond discount ($385, rounded) is amortized each interest period. Smart Touch Learning's first semiannual interest entry is as follows:

$$\frac{\text{A}\downarrow}{\text{Cash}\downarrow} = \frac{\text{L}\uparrow}{\text{Discount on Bonds Payable}\downarrow} + \frac{\text{E}\downarrow}{\text{Interest Expense}\uparrow}$$

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($4,500 + $385)	4,885	
	Discount on Bonds Payable ($3,851 × 1/10)		385
	Cash ($100,000 × 0.09 × 6/12)		4,500
	Paid semiannual interest and amortized discount.		

Interest expense of $4,885 for each six-month period is the sum of the following:

- Stated interest ($4,500, which is paid in cash)
- The amortization of discount, $385

This same entry would be made again on December 31, 2018. So, the bond discount balance would be $3,081 on December 31, 2018.

Bonds Payable

		100,000	Jan. 1

Discount on Bonds Payable

Jan. 1	3,851	385	Jun. 30
		385	Dec. 31
Bal.	3,081		

So, what would be the balance reported on the December 31, 2018, balance sheet for Bonds Payable?

Long-term Liabilities:		
Bonds Payable	$100,000	
Less: Discount on Bonds Payable	(3,081)	$96,919

Discount on Bonds Payable has a debit balance. Therefore, we credit the Discount on Bonds Payable account to amortize (reduce) its balance. Ten amortization entries will decrease the discount to zero (with rounding). Then the carrying amount of the bonds payable will be $100,000 at maturity—$100,000 in Bonds Payable minus $0 in Discount on Bonds Payable. Exhibit 12-7 shows the amortization schedule of the bond.

Exhibit 12-7 | **Bonds Payable—Discount Amortization Schedule**

Face value × Stated interest rate × Time = $100,000 × 0.09 × 6/12 = $4,500

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				$ 96,149
06/30/2018	$ 4,500	$ 4,885	$ 385	96,534
12/31/2018	4,500	4,885	385	96,919
06/30/2019	4,500	4,885	385	97,304
12/31/2019	4,500	4,885	385	97,689
06/30/2020	4,500	4,885	385	98,074
12/31/2020	4,500	4,885	385	98,459
06/30/2021	4,500	4,885	385	98,844
12/31/2021	4,500	4,885	385	99,229
06/30/2022	4,500	4,885	385	99,614
12/31/2022	4,500	4,886	386*	100,000
Total	$ 45,000	$ 48,851	$ 3,851	

Cash paid + Discount amortized = $4,500 + $385 = $4,885

Carrying amount + Discount amortized = $96,149 + $385 = $96,534

*rounded

Discount amortized = $3,851 / 10 = $385

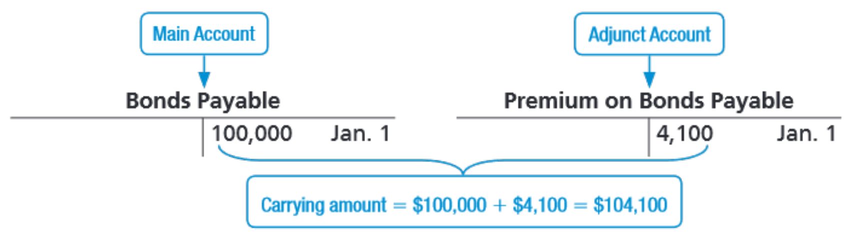
Issuing Bonds Payable at a Premium

To illustrate a bond premium, let's change the Smart Touch Learning example. Assume that the market interest rate is 8% when Smart Touch Learning issues its 9%, five-year bonds. These 9% bonds are attractive in an 8% market, and investors will pay a premium to acquire them. Assume the bonds are priced at 104.1 (104.1% of face value). In that case, Smart Touch Learning receives $104,100 cash upon issuance. Smart Touch Learning's entry to borrow money and issue these bonds is as follows:

A↑ = L↑ + E
Cash↑ = Bonds Payable↑, Premium on Bonds Payable↑

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	104,100	
	Premium on Bonds Payable ($104,100 − $100,000)		4,100
	Bonds Payable		100,000
	Issued bonds at a premium.		

After posting, the bond accounts have the following balances:



Adjunct Account
An account that is directly related to another account. Adjunct accounts have the same normal balance as the related account and are added to the related account on the balance sheet.

The Bonds Payable account and the Premium on Bonds Payable account each carry a credit balance. The premium is an adjunct account to Bonds Payable. **Adjunct accounts** have the same normal balance as the related account and are added to the related account on the balance sheet. Adjunct accounts work similarly to contra accounts—the only difference is that the adjunct account has the same type of balance as the main account, whereas the contra account has the opposite type of balance of its main account. Therefore, we add the Premium on Bonds Payable to Bonds Payable to determine the bonds' carrying amount. Smart Touch Learning would report these bonds payable on the balance sheet as follows immediately after issuance:

Long-term Liabilities:		
Bonds Payable	$100,000	
Add: Premium on Bonds Payable	4,100	$104,100

Interest Expense on Bonds Payable Issued at a Premium

The 1% difference between the bonds' 9% stated interest rate and the 8% market rate creates the $4,100 premium ($104,100 − $100,000 face value). Smart Touch Learning borrows $104,100 but must pay back only $100,000 at maturity. The premium is like a saving of interest expense to Smart Touch Learning. The premium cuts Smart Touch Learning's cost of borrowing and reduces interest expense to 8%, the market rate. The amortization of bond premium decreases interest expense over the life of the bonds.

Straight-Line Amortization of Bond Premium

In our example, the beginning premium is $4,100 and there are 10 semiannual interest periods during the bonds' five-year life. Therefore, 1/10 of the $4,100 ($410) of bond premium is amortized each interest period. Smart Touch Learning's first semiannual interest entry is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($4,500 − $410)	4,090	
	Premium on Bonds Payable ($4,100 × 1/10)	410	
	Cash ($100,000 × 0.09 × 6/12)		4,500
	Paid semiannual interest and amortized premium.		

A↓	=	L↓	+	E↓
Cash↓		Premium on Bonds Payable↓		Interest Expense↑

Interest expense of $4,090 is

- Stated interest ($4,500, which is paid in cash)
- *Minus* the amortization of the premium of $410

This same entry would be made again on December 31, 2018. So, the bond premium balance would be $3,280 on December 31, 2018.

Bonds Payable

		100,000	Jan. 1

Premium on Bonds Payable

Jun. 30	410	4,100	Jan. 1
Dec. 31	410		
		3,280	Bal.

At December 31, 2018, immediately after amortizing the bond premium, the bonds have the following carrying amount:

Long-term Liabilities:		
Bonds Payable	$100,000	
Add: Premium on Bonds Payable	3,280	$103,280

At maturity on December 31, 2022, the bond premium will have been fully amortized (it will have a zero balance), and the bonds' carrying amount will be $100,000 (the amount in the Bonds Payable account). Exhibit 12-8 (on the next page) shows the amortization schedule of the bond.

Exhibit 12-8 | **Bonds Payable—Premium Amortization Schedule**

Face value × Stated interest rate × Time = $100,000 × 0.09 × 6/12 = $4,500

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				$ 104,100
06/30/2018	$ 4,500	$ 4,090	$ 410	103,690
12/31/2018	4,500	4,090	410	103,280
06/30/2019	4,500	4,090	410	102,870
12/31/2019	4,500	4,090	410	102,460
06/30/2020	4,500	4,090	410	102,050
12/31/2020	4,500	4,090	410	101,640
06/30/2021	4,500	4,090	410	101,230
12/31/2021	4,500	4,090	410	100,820
06/30/2022	4,500	4,090	410	100,410
12/31/2022	4,500	4,090	410	100,000
Total	$ 45,000	$ 40,900	$ 4,100	

Carrying amount − Premium amortized = $104,100 − $410 = $103,690

Cash paid − Premium amortized = $4,500 − $410 = $4,090

Premium amortized = $4,100 / 10 = $410

Try It!

Schmidt Company issued $100,000, 4%, 10-year bonds payable at 98 on January 1, 2018.

6. Journalize the issuance of the bonds payable on January 1, 2018.

7. Journalize the payment of semiannual interest and amortization of the bond discount or premium (using the straight-line amortization method) on July 1, 2018.

8. Assume the bonds payable was instead issued at 106. Journalize the issuance of the bonds payable and the payment of the first semiannual interest and amortization of the bond discount or premium.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12-5 through S12-8. MyAccountingLab

HOW IS THE RETIREMENT OF BONDS PAYABLE ACCOUNTED FOR?

Learning Objective 4
Journalize transactions to retire bonds payable

Retirement of bonds payable involves paying the face value of the bond. Bonds can be retired at the maturity date or before.

Retirement of Bonds at Maturity

When the bond is matured, the carrying value always equals the face value. In the case of Smart Touch Learning, with both the discount and premium examples, on December

31, 2022, the carrying amount and face value are $100,000. The entry to retire the bonds, assuming the last interest payment has already been recorded, is as follows:

Date	Accounts and Explanation	Debit	Credit
2022			
Dec. 31	Bonds Payable	100,000	
	Cash		100,000
	Retired bonds payable at maturity.		

A↓	=	L↓	+	E
Cash↓		Bonds Payable↓		

Retirement of Bonds Before Maturity

Normally, companies wait until maturity to pay off, or *retire*, their bonds payable. But companies sometimes retire their bonds prior to maturity. The main reason for retiring bonds early is to relieve the pressure of paying the interest payments.

Some bonds are **callable**, which means the company may *call*, or pay off, the bonds at a specified price. The call price is usually 100 or a few percentage points above face value, perhaps 101 or 102, to provide an incentive to the bondholder. Callable bonds give the issuer the flexibility to pay off the bonds when it benefits the company. An alternative to calling the bonds is to purchase any available bonds in the open market at their current market price. Whether the bonds are called or purchased in the open market, the same accounts are used in the journal entry.

Callable Bonds
Bonds that the issuer may call and pay off at a specified price whenever the issuer wants.

Suppose on December 31, 2018, Smart Touch Learning has $100,000 of bonds payable outstanding with a remaining discount balance of $3,081 (the original discount of $3,851 on January 1, 2018, [$100,000 − $96,149] less the straight-line amortization of $385 in June and December of 2018 [$3,851 − $385 − $385]).

Lower interest rates have convinced management to pay off these bonds now. These bonds are callable at 100. If the market price of the bonds is 95, should Smart Touch Learning call the bonds at 100 or purchase them in the open market at 95? The market price is lower than the call price, so Smart Touch Learning should buy the bonds on the open market at their market price. Retiring the bonds on December 31, 2018, at 95 results in a gain of $1,919, computed as follows:

Face value of the bonds being retired	$ 100,000
Less: Discount	(3,081)
Carrying amount of bonds payable	96,919
Less: Market price paid to retire the bonds ($100,000 × 0.95)	(95,000)
Gain on retirement of bonds payable	$ 1,919

The following entry records retirement of the bonds, immediately after the December 31, 2018, interest payment:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bonds Payable	100,000	
	Discount on Bonds Payable		3,081
	Gain on Retirement of Bonds Payable		1,919
	Cash		95,000
	Retired bonds payable prior to maturity.		

A↓	=	L↓	+	E↑
Cash↓		Bonds Payable↓ Discount on Bonds Payable↓		Gain on Retirement of Bonds Payable↑

After posting, the bond accounts have zero balances.

Bonds Payable

		100,000	Jan. 1
Dec. 31	100,000		
		0	Bal.

Discount on Bonds Payable

Jan. 1	3,851	385	Jun. 30
		385	Dec. 31
		3,081	Dec. 31
Bal.	0		

The journal entry removes the bonds from the books and records a gain on retirement. If the bonds being retired have a premium rather than a discount, any existing premium would be removed with a debit. If Smart Touch Learning retired only half of these bonds, it would remove only half the discount or premium.

When retiring bonds before maturity, follow these steps:

1. Record partial-period amortization of discount or premium and partial-period interest payment if the retirement date does not fall on an interest payment date.
2. Remove the portion of unamortized Discount or Premium that relates to the bonds being retired.
3. Debit Bonds Payable at face value.
4. Credit a gain or debit a loss on retirement.
5. Credit Cash for amount paid to retire the bonds.

Try It!

9. Herrera Corporation issued a $400,000, 4.5%, 10-year bond payable on January 1, 2018. Journalize the payment of the bond payable at maturity. (Give the date.)

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12-9 and S12-10. MyAccountingLab

HOW ARE LIABILITIES REPORTED ON THE BALANCE SHEET?

Learning Objective 5
Report liabilities on the balance sheet

At the end of each period, a company reports all of its current and long-term liabilities on the balance sheet. As we have seen throughout the textbook, there are two categories of liabilities, current and long-term. Exhibit 12-9 shows Smart Touch Learning's liabilities portion of its balance sheet (amounts assumed) that we have discussed up to this point.

Exhibit 12-9 | **Liabilities**

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018			
Liabilities			
Current Liabilities:			
Accounts Payable		$ 12,620	
Employee Income Taxes Payable		2,000	
FICA—OASDI Taxes Payable		1,158	
FICA—Medicare Taxes Payable		855	
Employee Health Insurance Payable		180	
United Way Payable		20	
Federal Unemployment Taxes Payable		15	
State Unemployment Taxes Payable		60	
Employee Bonus Payable		1,000	
Vacation Benefits Payable		800	
Income Tax Payable		3,780	
Sales Tax Payable		600	
Estimated Warranty Payable		700	
Notes Payable (short-term)		400	
Current Portion of Mortgage Payable		1,305	
Current Portion of Long-term Notes Payable		5,000	
Total Current Liabilities			$ 30,493
Long-term Liabilities:			
Notes Payable		15,000	
Mortgage Payable		97,541	
Bonds Payable	$ 100,000		
Less: Discount on Bonds Payable	(3,081)	96,919	
Total Long-term Liabilities			209,460
Total Liabilities			$ 239,953

TYING IT ALL TOGETHER

The Walt Disney Company is a diversified entertainment company that is comprised of five different business segments: Media Networks (cable and broadcast television), Parks and Resorts (various Walt Disney Resorts), Studio Entertainment (motion pictures), consumer products (Disney merchandise), and Interactive (multi-platform games). Walt Disney began as a cartoon studio in 1920 and today is known as a leading worldwide entertainment provider. (You can find the Walt Disney Company's annual report at https://www.sec.gov/Archives/edgar/data/1001039/000100103915000255/fy2015_q4x10k.htm)

What are the different types of long-term debt that The Walt Disney Company reports on its balance sheet?

The Walt Disney Company reports borrowings ($12,773 million), deferred income taxes ($4,051 million), and other long-term liabilities ($6,369 million) for total long-term debt of $23,193 million.

In order for a borrowing to be listed as long-term, it must be owed in more than one year. Where do companies, such as Walt Disney, report the current portion of long-term debt?

The current portion of long-term debt should be reported in the current liabilities section of the balance sheet. For example, The Walt Disney Company reports $4,563 million of current portion of long-term borrowings.

Try It!

10. Weaver Corporation includes the following selected accounts in its general ledger at December 31, 2018:

Notes Payable (long-term)	$ 75,000	Interest Payable (due next year)	$ 720
Bonds Payable (long-term)	195,000	Sales Tax Payable	480
Accounts Payable	20,400	Premium on Bonds Payable	5,850
Salaries Payable	1,680	Estimated Warranty Payable	1,080

Prepare the liabilities section of Weaver Corporation's balance sheet at December 31, 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S12-11. MyAccountingLab

HOW DO WE USE THE DEBT TO EQUITY RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6
Use the debt to equity ratio to evaluate business performance

Debt to Equity Ratio
A ratio that measures the proportion of total liabilities relative to total equity. Total liabilities / Total equity.

The relationship between total liabilities and total equity—called the **debt to equity ratio**—shows the proportion of total liabilities relative to the total equity. Thus, this ratio measures financial leverage. If the debt to equity ratio is greater than 1, then the company is financing more assets with debt than with equity. If the ratio is less than 1, then the company is financing more assets with equity than with debt. The higher the debt to equity ratio, the greater the company's financial risk.

Kohl's Corporation reported total liabilities and total equity (in millions) on its Fiscal 2015 Annual Report as follows:

	January 30, 2016	January 31, 2015
Total liabilities	$8,115	$8,342
Total equity	5,491	5,991

Kohl's debt to equity ratio as of January 30, 2016 (2015 fiscal year), and January 31, 2015 (2014 fiscal year), can be calculated as follows:

Debt to equity ratio	= Total liabilities / Total equity
2015	= $8,115 / $5,491
	= 1.48
2014	= $8,342 / $5,991
	= 1.39

Kohl's debt to equity ratio as of January 30, 2016, is above 1, indicating that the company is financing more assets with debt than with equity. Notice that its debt to equity ratio has not improved from January 31, 2015, when Kohl's had a debt to equity ratio of 1.39. This has to do with the fact that Kohl's experienced a decrease in liabilities that was smaller than the decrease in equity during 2015. Kohl's debt to equity ratios for both years indicate the company is taking advantage of financial leverage but is at a higher risk than a company that finances assets with less debt and more equity.

ETHICS

Should additional debt be issued?

Phillip Mader is president and majority stockholder of Knightly Corporation. Phillip owns 54% of the stock in the corporation. The corporation is in dire need of additional cash inflow in order to maintain operations. Phillip is urging the board of directors to issue additional debt even though he knows that the corporation already has a substantial amount of debt. Phillip is well aware that by issuing additional debt, the corporation's debt to equity ratio will increase significantly. He believes this will negatively affect the corporation's credit rating and will further limit the company's ability to borrow at low interest rates in the future. Phillip, however, believes all of this is offset by his desire to retain control of the corporation. If the corporation doesn't issue additional debt, it will be forced to issue stock in order to obtain the necessary funds. Phillip does not have the ability to purchase any of the additional shares of stock, and he knows that he will lose his majority stockholder status. What should Phillip do? What would you do?

Solution

Phillip's overall ethical responsibility lies with the good of the company over what is best for him. In urging the corporation to issue additional debt, he is putting his needs and desires above the best interests of the corporation and other stockholders. Phillip is aware that by issuing additional debt the corporation will be negatively affected. He should urge the board to issue stock—even though he will not gain personally from the situation. His leadership role as president of the corporation should take precedence over his role as majority stockholder.

Try It!

11. Payne Corporation has the following accounts as of December 31, 2018:

Total Assets	$ 60,000
Total Liabilities	20,000
Total Equity	40,000

Compute the debt to equity ratio at December 31, 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S12-12. MyAccountingLab

APPENDIX 12A: The Time Value of Money

WHAT IS THE TIME VALUE OF MONEY, AND HOW IS PRESENT VALUE AND FUTURE VALUE CALCULATED?

Learning Objective 7
Use time value of money to compute present value and future value

A dollar received today is worth more than a dollar to be received in the future because you can invest today's dollar and earn additional interest so you'll have more cash next year. The fact that invested cash earns interest over time is called the *time value of money*. This concept explains why we would prefer to receive cash sooner rather than later. The time value of money is used to determine the present value of a bond—its market price.

Time Value of Money Concepts

The time value of money depends on these key factors:

1. The principal amount (p)
2. The number of periods (n)
3. The interest rate (i)

Annuity
A stream of equal cash payments made at equal time intervals.

The principal (p) refers to the amount of the investment or borrowing. We state the principal as either a single lump sum or an annuity. For example, if you win the lottery, you have the choice of receiving all the winnings now (a single lump sum) or receiving a series of equal payments for a period of time in the future (an annuity). An **annuity** is a stream of *equal cash payments* made at *equal time intervals*.[1] For example, $100 cash received per month for 12 months is an annuity.

The number of periods (n) is the length of time from the beginning of the investment or borrowing until termination. All else being equal, the shorter the investment or borrowing period, the lower the total amount of interest earned or paid. If you withdraw your savings after four years rather than five years, you will earn less interest. For bonds, the number of periods is the number of interest payments made. For example, if a five-year bond pays interest semiannually, the number of periods will be 10 (5 years × 2 payments per year).

The interest rate (i) is the percentage earned on the investment or paid on the borrowing and can be stated annually or in days, months, or quarters. The interest rate must reflect the number of time periods in the year. A five-year semiannual bond that has an annual market interest rate of 10% will reflect a market interest rate of 5% semiannually (10% per year / 2 periods per year). Interest can be computed as either simple interest or compound interest.

Simple Interest Versus Compound Interest

Simple Interest
Interest calculated only on the principal amount.

Compound Interest
Interest calculated on the principal and on all previously earned interest.

Simple interest means that interest is calculated *only* on the principal amount. **Compound interest** means that interest is calculated on the principal *and* on all previously earned interest. *Compound interest assumes that all interest earned will remain invested and earn additional interest at the same interest rate.* Exhibit 12A-1 compares simple interest of 6% on a five-year, $10,000 investment with interest compounded yearly (rounded to the nearest dollar). As you can see, the amount of compound interest earned yearly grows as the base on which it is calculated (principal plus cumulative interest to date) grows. Over the life of this investment, the total amount of compound interest is more than the total amount of simple interest. Most investments yield compound interest, so we assume compound interest, rather than simple interest, for this chapter.

Exhibit 12A-1 | **Simple Interest Versus Compound Interest—$10,000 at 6% for 5 Years**

Year	Simple Interest Calculation	Simple Interest	Compound Interest Calculation	Compound Interest
1	$10,000 × 6%	$ 600	$10,000 × 6%	$ 600
2	$10,000 × 6%	600	($10,000 + $600) × 6%	636
3	$10,000 × 6%	600	($10,000 + $600 + $636) × 6%	674*
4	$10,000 × 6%	600	($10,000 + $600 + $636 + $674) × 6%	715
5	$10,000 × 6%	600	($10,000 + $600 + $636 + $674 + $715) × 6%	758
	Total interest	$ 3,000	Total interest	$ 3,383

*all calculations rounded to the nearest dollar for the rest of this chapter

[1] An *ordinary annuity* is an annuity in which the installments occur at the *end* of each period. An *annuity due* is an annuity in which the installments occur at the beginning of each period. Throughout this chapter, we use ordinary annuities.

Future Value and Present Value Factors

The future value or present value of an investment simply refers to the value of an investment at different points in time. We can calculate the future value or present value of any investment by knowing (or assuming) information about the three factors we listed earlier: (1) the principal amount, (2) number of periods, and (3) the interest rate. For example, in Exhibit 12A-1, we calculated the interest that would be earned on (1) a $10,000 principal, (2) invested for five years, (3) at 6% interest. The future value of the investment is simply its worth at the end of a specific time frame (for example, five years), or the original principal *plus* the interest earned. In our example, the future value of the investment is as follows:

Future value = Principal + Interest earned
= $10,000 + $3,383
= $13,383

If we invest $10,000 *today*, its *present value* is simply $10,000. Present value is the value of an investment today. So another way of stating the future value is as follows:

Future value = Present value + Interest earned

If we know the future value and want to find the present value, we can rearrange the equation as follows:

Present value = Future value − Interest earned
$10,000 = $13,383 − $3,383

The only difference between present value and future value is the amount of interest that is earned in the intervening time span.

Calculating each period's compound interest, as we did in Exhibit 12A-1, and then adding it to the present value to determine the future value (or subtracting it from the future value to determine the present value) is tedious. Fortunately, mathematical formulas have been developed that specify future values and present values for unlimited combinations of interest rates (i) and time periods (n). Separate formulas exist for single lump sum investments and annuities.

These formulas are programmed into most business calculators, so the user only needs to correctly enter the principal amount, interest rate, and number of time periods to find present or future values. These formulas are also programmed into spreadsheet functions in Microsoft Excel. Using Excel to calculate present values is illustrated later in the Capital Investment Decisions chapter. In this chapter, we use present value tables. The present value tables contain the results of the formulas for various interest rate and time period combinations.

The formulas and resulting tables are shown in Appendix A at the end of this book:

1. **Present Value of $1** (Appendix A, Table A-1)—used to calculate the value today of one future amount (a lump sum)
2. **Present Value of Ordinary Annuity of $1** (Appendix A, Table A-2)—used to calculate the value today of a series of equal future amounts (annuities)
3. **Future Value of $1** (Appendix A, Table A-3)—used to calculate the value in the future of one present amount (a lump sum)
4. **Future Value of Ordinary Annuity of $1** (Appendix A, Table A-4)—used to calculate the value in the future of a series of equal future amounts (annuities)

Take a moment to look at these tables because we are going to use them throughout the rest of the appendix. Note that the columns are interest rates (i) and the rows are periods (n).

The numbers in each table, known as present value factors (PV factors) and future value factors (FV factors), are for an investment (or loan) of $1. For example, in Appendix A, Table A-1, the PV factor for interest rate of 6% ($i = 6\%$) and 5 periods ($n = 5$) is 0.747. To find the present value of an amount other than $1, multiply the PV factor by the future amount.

The annuity tables are derived from the lump sum tables. For example, the Annuity PV factors (in the Present Value of Ordinary Annuity of $1 table) are the *sums* of the PV factors found in the Present Value of $1 tables for a given number of time periods. The annuity tables allow us to perform one-step calculations rather than separately computing the present value of each annual cash installment and then summing the individual present values or future values.

Present Value of a Lump Sum

The process for calculating present values is often called *discounting future cash flows* because future amounts are discounted (interest removed) to their present value. Let's consider the investment in Exhibit 12A-1. The future value of the investment is $13,383. So the question is "How much would I have to invest today (in the present time) to have $13,383 five years in the future if I invested at 6%?" Let's calculate the present value using PV factors.

Present value = Future value × PV factor for $i = 6\%$, $n = 5$

We determine the PV factor from the table labeled Present Value of $1 (Appendix A, Table A-1). We use this table for lump sum amounts. We look down the 6% column and across the 5 periods row and find the PV factor is 0.747. We finish our calculation as follows:

Present value = Future value × PV factor for $i = 6\%$, $n = 5$
= $13,383 × 0.747
= $9,997

Notice the calculation is off by $3 due to rounding ($10,000 − $9,997). The PV factors are rounded to three decimal places, so the calculations may not be exact. Also, the interest calculations in Exhibit 12A-1 were rounded to the nearest dollar. Therefore, there are two rounding issues in this exhibit. However, we do have the answer to our question: If approximately $10,000 is invested today at 6% for five years, at the end of five years, the investment will grow to $13,383. Or, conversely, if we expect to receive $13,383 five years from now, its equivalent (discounted) value today is approximately $10,000. In other words, we need to invest approximately $10,000 today at 6% to have $13,383 five years from now.

Present Value of an Annuity

Let's now assume that instead of receiving a lump sum at the end of the five years, you will receive $2,000 at the end of each year. This is a series of equal payments ($2,000) over equal intervals (years), so it is an annuity. How much would you have to invest today to receive these payments, assuming an interest rate of 6%?

We determine the annuity PV factor from the table labeled Present Value of Ordinary Annuity of $1 (Appendix A, Table A-2). We use this table for annuities. We look down the 6% column and across the 5 periods row and find the annuity PV factor is 4.212. We finish our calculation as follows:

$$\begin{aligned}\text{Present value} &= \text{Amount of each cash inflow} \times \text{Annuity PV factor for } i = 6\%, n = 5 \\ &= \$2{,}000 \times 4.212 \\ &= \$8{,}424\end{aligned}$$

This means that an investment today of $8,424 at 6% will yield $2,000 per year for the next five years, or total payments of $10,000 over 5 years ($2,000 per year × 5 years). The reason is that interest is being earned on principal that is left invested each year. Let's verify the calculation.

Year	[1] Beginning Balance	[2] Interest	[3] Withdrawal	[4] Ending Balance
	Previous [4]	[1] × 6%	$2,000	[1] + [2] − [3]
0				$ 8,424
1	$ 8,424	$ 505	$ 2,000	6,929
2	6,929	416	2,000	5,345
3	5,345	321	2,000	3,666
4	3,666	220	2,000	1,886
5	1,886	114*	2,000	0

*rounded up by $1

The chart shows that the initial investment of $8,424 is invested for one year, earning $505 in interest. At the end of that period, the first withdrawal of $2,000 takes place, leaving a balance of $6,929 ($8,424 + $505 − $2,000). At the end of the five years, the ending balance is $0 proving that the present value of the $2,000 annuity is $8,424.

Present Value of Bonds Payable

We can use what we have just learned about the present value of a lump sum and present value of an annuity to calculate the present value of bonds payable. The present value of a bond—its market price—is the sum of:

- the present value of the principal amount to be paid at maturity, a single amount (present value of a lump sum)
- *plus* the present value of the future stated interest payments, an annuity because it occurs in equal amounts over equal time periods (present value of an annuity).

Present Value of a Bonds Payable Issued at a Discount

Let's compute the present value of Smart Touch Learning's 9%, five-year bonds. The face value of the bonds is $100,000, and they pay (9% × 6/12) or 4.5% stated interest semiannually. At issuance, the annual market interest rate is 10% (5% semiannually). Therefore, the market interest rate for each of the 10 semiannual periods is 5%. We use 5% to compute the present value (PV) of the maturity value and the present value (PV) of the stated interest. The present value of these bonds is $96,149, computed as shown on the next page:

Present value of principal:

Present value $=$ Future value $\times$ PV factor for $i = 5\%$, $n = 10$
$= \$100{,}000 \times 0.614$
$= \$61{,}400$

Present value of stated interest:

Present value $=$ Amount of each cash flow $\times$ Annuity PV factor for $i = 5\%$, $n = 10$
$= (\$100{,}000 \times 0.09 \times 6/12) \times 7.722$
$= \$34{,}749$

Present value of bonds payable:

Present value $=$ PV of principal $+$ PV of stated interest
$= \$61{,}400 + \$34{,}749$
$= \$96{,}149$

Notice that the stated interest rate (9% × 6/12 = 4.5%), not the market interest rate (5%), is used to calculate the amount of each cash flow for interest. This is because the bonds payable pay interest based on the rate stated in the contract, not the rate of the market.

Present Value of a Bonds Payable Issued at a Premium

Let's consider a premium price for the Smart Touch Learning bonds. Suppose the market interest rate is 8% at issuance (4% for each of the 10 semiannual periods). We would compute the market price of these bonds as follows:

Present value of principal:

Present value $=$ Future value $\times$ PV factor for $i = 4\%$, $n = 10$
$= \$100{,}000 \times 0.676$
$= \$67{,}600$

Present value of stated interest:

Present value $=$ Amount of each cash flow $\times$ Annuity PV factor for $i = 4\%$, $n = 10$
$= (\$100{,}000 \times 0.09 \times 6/12) \times 8.111$
$= \$36{,}500$

Present value of bonds payable:

Present value $=$ PV of principal $+$ PV of stated interest
$= \$67{,}600 + \$36{,}500$
$= \$104{,}100$

APPENDIX 12A

Future Value of a Lump Sum

Let's now use the tables to calculate the future value of a lump sum considering the investment in Exhibit 12A-1. Instead of calculating present value, though, we will change the scenario to evaluate the future value. "If I invested \$10,000 today (in the present time), how much would I have in five years at an interest rate of 6%?" We will calculate the future value using FV factors.

Future value $=$ Present value $\times$ FV factor for $i = 6\%$, $n = 5$

We determine the FV factor from the table labeled Future Value of $1 (Appendix A, Table A-3). We use this table for lump sum amounts. We look down the 6% column and across the 5 periods row and find the FV factor is 1.338. We finish our calculation as follows:

$$\begin{aligned}\text{Future value} &= \text{Present value} \times \text{FV factor for } i = 6\%, n = 5\\ &= \$10{,}000 \times 1.338\\ &= \$13{,}380\end{aligned}$$

Notice the calculation is off by $3 due to rounding ($13,380 − $13,383). The FV factors are rounded to three decimal places, so the calculations may not be exact. Also, the interest calculations in Exhibit 12A-1 were rounded to the nearest dollar. Therefore, there are two rounding issues in this exhibit. However, we do have the answer to our question: If $10,000 is invested today at 6% for five years, at the end of five years, the investment will grow to $13,380.

Future Value of an Annuity

Let's now calculate the future value of an annuity assuming that you will receive $2,000 at the end of each year. This is a series of equal payments ($2,000) over equal intervals (years), so it is an annuity. How much would these payments be worth five years from now, assuming an interest rate of 6%?

We determine the annuity FV factor from the table labeled Future Value of Ordinary Annuity of $1 (Appendix A, Table A-4). We use this table for annuities. We look down the 6% column and across the 5 periods row and find the annuity FV factor is 5.637. We finish our calculation as follows:

$$\begin{aligned}\text{Future value} &= \text{Amount of each cash inflow} \times \text{Annuity FV factor for } i = 6\%, n = 5\\ &= \$2{,}000 \times 5.637\\ &= \$11{,}274\end{aligned}$$

This means investing $2,000 per year for five years at 6% will yield $11,274. The reason is that interest is being earned on principal that is left invested each year.

APPENDIX 12A

Try It!

12A. On December 31, 2018, when the market interest rate is 8%, Arnold Corporation issues $200,000 of 6%, 10-year bonds payable. The bonds pay interest semiannually. Determine the present value of the bonds at issuance.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12A-13 through S12A-15. MyAccountingLab

APPENDIX 12B: Effective-Interest Method of Amortization

HOW ARE BONDS PAYABLE ACCOUNTED FOR USING THE EFFECTIVE-INTEREST AMORTIZATION METHOD?

Learning Objective 8
Journalize transactions for bonds payable and interest expense using the effective-interest amortization method

Effective-Interest Amortization Method
An amortization model that calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium.

We began this chapter with straight-line amortization to introduce the concept of amortizing bonds. A more precise way of amortizing bonds used in practice is called the **effective-interest amortization method**. This method calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium. This appendix explains the present value concepts used to amortize bond discounts and premiums using the effective-interest amortization method.

Generally Accepted Accounting Principles require that interest expense be measured using the *effective-interest amortization method* unless the straight-line amounts are similar. In that case, either method is permitted. Total interest expense over the life of the bonds is the same under both methods; however, interest expense each year is different between the two methods. Let's look at how the effective-interest amortization method works.

Effective-Interest Amortization for a Bond Discount

Assume that Smart Touch Learning issues $100,000 of 9% bonds at a time when the market rate of interest is 10%. These bonds mature in five years and pay interest semiannually, so there are 10 semiannual interest payments. As you just saw in Appendix 12A, the issue price of the bonds is $96,149, and the discount on these bonds is $3,851 ($100,000 − $96,149).

When using the effective-interest amortization method, the amount of the interest expense is calculated using the *carrying amount* of the bonds and the *market interest rate*. The interest payment is calculated using the *face value* of the bonds and the *stated interest rate*. The amount of discount amortization is the excess of the calculated interest expense over the interest payment. Exhibit 12B-1 shows how to calculate interest expense by the effective-interest amortization method.

Exhibit 12B-1 | Bonds Payable—Discount Amortization Schedule; Effective-Interest Amortization Method

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				$ 96,149
06/30/2018	$ 4,500	$ 4,807	$ 307	96,456
12/31/2018	4,500	4,823	323	96,779
06/30/2019	4,500	4,839	339	97,118
12/31/2019	4,500	4,856	356	97,474
06/30/2020	4,500	4,874	374	97,848
12/31/2020	4,500	4,892	392	98,240
06/30/2021	4,500	4,912	412	98,652
12/31/2021	4,500	4,933	433	99,085
06/30/2022	4,500	4,954	454	99,539
12/31/2022	4,500	4,961*	461	100,000
Total	$ 45,000	$ 48,851	$ 3,851	

*rounded

Interest Expense − Cash paid
= $4,807 − $4,500 = $307

Carrying amount + Discount amortized
= $96,149 + $307 = $96,456

Face value × *Stated* Interest rate × Time
= $100,000 × 0.09 × 6/12 = $4,500

Carrying amount × *Market* interest rate × Time
= $96,149 × 0.10 × 6/12 = $4,807

When recording the interest payment for the bonds payable, the *accounts* debited and credited under the effective-interest amortization method and the straight-line amortization method are the same. Only the *amounts* differ. Smart Touch Learning would record the first interest payment on June 30 as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($96,149 × 0.10 × 6/12)	4,807	
	Discount on Bonds Payable ($4,807 − $4,500)		307
	Cash ($100,000 × 0.09 × 6/12)		4,500
	Paid semiannual interest and amortized discount.		

A↓	=	L↑	+	E↓
Cash↓	=	Discount on Bonds Payable↓		Interest Expense↑

Regardless of which method is used, the *total* amount of cash paid and *total* interest expense is the same. You can verify this by reviewing the totals from Exhibit 12-7 and Exhibit 12B-1.

Effective-Interest Amortization of a Bond Premium

Smart Touch Learning may issue its bonds payable at a premium. Assume that Smart Touch Learning issues $100,000 of five-year, 9% bonds when the market interest rate is 8%. The bonds' issue price is $104,100, and the premium is $4,100, as calculated in Appendix 12A. When a bond is issued at a premium, the interest expense calculation using the

effective-interest amortization method uses the *carrying amount* of the bonds and the *market interest rate* as shown with a discounted bond. The calculation for the amount of premium amortization is calculated as the difference between the cash paid and the calculated interest expense. Exhibit 12B-2 provides the amortization schedule using the effective-interest amortization method for Smart Touch Learning.

Exhibit 12B-2 | Bonds Payable—Premium Amortization Schedule; Effective-Interest Amortization Method

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				$ 104,100
06/30/2018	$ 4,500	$ 4,164	$ 336	103,764
12/31/2018	4,500	4,151	349	103,415
06/30/2019	4,500	4,137	363	103,052
12/31/2019	4,500	4,122	378	102,674
06/30/2020	4,500	4,107	393	102,281
12/31/2020	4,500	4,091	409	101,872
06/30/2021	4,500	4,075	425	101,447
12/31/2021	4,500	4,058	442	101,005
06/30/2022	4,500	4,040	460	100,545
12/31/2022	4,500	3,955*	545	100,000
Total	$ 45,000	$ 40,900	$ 4,100	

*rounded

Cash paid − Interest expense = $4,500 − $4,164 = $336

Carrying amount − Premium amortized = $104,100 − $336 = $103,764

Face value × *Stated* Interest rate × Time = $100,000 × 0.09 × 6/12 = $4,500

Carrying amount × *Market* interest rate × Time = $104,100 × 0.08 × 6/12 = $4,164

Smart Touch Learning will record the first interest payment on June 30 as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($104,100 × 0.08 × 6/12)	4,164	
	Premium on Bonds Payable ($4,500 − $4,164)	336	
	Cash ($100,000 × 0.09 × 6/12)		4,500
	Paid semiannual interest and amortized premium.		

A↓	=	L↓	+	E↓
Cash↓		Premium on Bonds Payable↓		Interest Expense↑

Regardless of which method is used, the *total* amount of cash paid and *total* interest expense is the same. You can verify this by reviewing the totals from Exhibit 12-8 and Exhibit 12B-2.

Try It!

13B. On January 1, 2018, when the market interest rate is 6%, Hawkins Corporation issues $200,000 of 8%, five-year bonds payable. The bonds pay interest semiannually. Hawkins Corporation received $217,040 in cash at issuance. Assume interest payment dates are June 30 and December 31.

Prepare an effective-interest amortization method amortization table for the first two semiannual interest periods.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S12B-16 and S12B-17. MyAccountingLab

REVIEW

> Things You Should Know

1. How are long-term notes payable and mortgages payable accounted for?

- Long-term notes payable and mortgages payable are reported in the long-term liabilities section of the balance sheet unless there is a portion due within one year. That portion is shown in the current liabilities section of the balance sheet.
- An amortization schedule should be prepared that details each loan payment's allocation between principal and interest and also the beginning and ending balances of the loan.
- Mortgages payable are long-term debts that are backed with a security interest in specific property.

2. What are bonds?

- Bonds payable represent long-term debt issued to multiple lenders called bondholders, usually in increments of $1,000 per bond.
- The bond requires a face value payment at maturity and interest payments based on a stated interest rate over the life of the bond.
- A bond can be issued at face value, a discount, or a premium.
    - Face value—Bond is issued at face value. The stated interest rate is equal to the market interest rate.
    - A discount—Bond is issued at less than face value. The stated interest rate is less than the market interest rate.
    - A premium—Bond is issued for more than face value. The stated interest rate is higher than the market interest rate.

3. How are bonds payable accounted for using the straight-line amortization method?

- The basic journal entry to record the issuance of bonds payable debits Cash and credits Bonds Payable.
    - If a bond is issued at a discount, Discount on Bonds Payable, a contra account, will be debited for the difference between the face value and cash received.
    - If a bond is issued at a premium, Premium on Bonds Payable, an adjunct account, will be credited for the difference between the cash received and face value.

- Interest payments must be recorded with a debit to Interest Expense and a credit to Cash.
  - Discount on Bonds Payable and Premium on Bonds Payable must be amortized over the life of the bond.
  - The straight-line amortization method allocates an equal amount of the bond discount or premium to each interest period.

4. How is the retirement of bonds payable accounted for?

- When bonds are retired at maturity, the entry involves a debit to Bonds Payable and a credit to Cash for the face value of the bond.
- Retirement of bonds before maturity involves removing the remaining portion of the discount or premium account and crediting a gain or debiting a loss on retirement.

5. How are liabilities reported on the balance sheet?

- Current and long-term liabilities are reported separately on the balance sheet.
- Bonds payable are shown at the carrying amount.

6. How do we use the debt to equity ratio to evaluate business performance?

- The debt to equity ratio shows the proportion of total liabilities relative to the total equity. The ratio measures financial leverage.
- Total liabilities / Total equity.

7. What is the time value of money, and how is present value and future value calculated? (Appendix 12A)

- The fact that invested money earns interest over time is called the time value of money. This concept explains why we would prefer to receive cash sooner rather than later.
- Lump sum payments are one-time cash payments.
- Annuities are streams of equal cash payments made at equal time intervals.
- To calculate the present value of a lump sum:

$$\boxed{\text{Present value} = \text{Future value} \times \text{PV factor for } i = ?\%,\ n = ?}$$

- To calculate the present value of an annuity:

$$\boxed{\text{Present value} = \text{Amount of each cash inflow} \times \text{Annuity PV factor for } i = ?\%,\ n = ?}$$

- To calculate the future value of a lump sum:

$$\boxed{\text{Future value} = \text{Present value} \times \text{FV factor for } i = ?\%,\ n = ?}$$

- To calculate the future value of an annuity:

$$\boxed{\text{Future value} = \text{Amount of each cash inflow} \times \text{Annuity FV factor for } i = ?\%,\ n = ?}$$

CHAPTER 12

8. How are bonds payable accounted for using the effective-interest amortization method? (Appendix 12B)

- The effective-interest amortization method calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium.
- Using the effective-interest amortization method, the amount of interest expense is calculated using the carrying amount of the bonds and the market interest rate.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

West Virginia Power Company has 8%, 10-year bonds payable that mature on June 30, 2028. The bonds are issued on June 30, 2018, and West Virginia Power pays interest each June 30 and December 31.

Requirements

1. Will the bonds be issued at face value, at a premium, or at a discount if the market interest rate on the date of issuance is 7%? If the market interest rate is 10%? (See Learning Objective 2)
2. West Virginia Power issued $100,000 of the bonds at 87.548. Round all calculations to the nearest dollar. (See Learning Objective 2)
   a. Record issuance of the bonds on June 30, 2018.
   b. Record the payment of interest and amortization of the discount on December 31, 2018. Use the straight-line amortization method.
   c. Compute the bonds' carrying amount at December 31, 2018.
   d. Record the payment of interest and amortization of discount on June 30, 2019.

> Solution

Requirement 1

If the market interest rate is 7%, the bonds will be issued at a premium.

If the market interest rate is 10%, the bonds will be issued at a discount.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
(a) Jun. 30	Cash ($100,000 × 0.87548)	87,548	
	Discount on Bonds Payable ($100,000 − $87,548)	12,452	
	Bonds Payable		100,000
	Issued bonds at a discount.		
(b) Dec. 31	Interest Expense ($4,000 + $623)	4,623	
	Discount on Bonds Payable ($12,452 × 1/20)		623
	Cash ($100,000 × 0.08 × 6/12)		4,000

CHAPTER 12

c. Carrying amount at December 31, 2018

Long-term Liabilities:		
Bonds Payable	$100,000	
Less: Discount on Bonds Payable ($12,452 − $623)	(11,829)	$ 88,171

Date	Accounts and Explanation	Debit	Credit
2019			
(d) Jun. 30	Interest Expense ($4,000 + $623)	4,623	
	Discount on Bonds Payable ($12,452 × 1/20)		623
	Cash ($100,000 × 0.08 × 6/12)		4,000

> Key Terms

Adjunct Account (p. 632)
Amortization Schedule (p. 620)
Annuity (p. 640) (Appendix 12A)
Bond Payable (p. 623)
Callable Bonds (p. 635)
Carrying Amount of Bonds (p. 630)
Compound Interest (p. 640) (Appendix 12A)
Debentures (p. 625)
Debt to Equity Ratio (p. 638)
Discount on Bonds Payable (p. 625)
Effective-Interest Amortization Method (p. 646) (Appendix 12B)
Face Value (p. 624)
Financial Leverage (p. 628)
Future Value (p. 626)
Long-term Liability (p. 620)
Market Interest Rate (p. 627)
Mortgages Payable (p. 621)
Premium on Bonds Payable (p. 625)
Present Value (p. 626)
Secured Bonds (p. 625)
Serial Bonds (p. 625)
Simple Interest (p. 640) (Appendix 12A)
Stated Interest Rate (p. 625)
Straight-Line Amortization Method (p. 630)
Term Bonds (p. 625)
Time Value of Money (p. 626)

> Quick Check

Learning Objective 1

1. Flipco signed a 10-year note payable on January 1, 2018, of $800,000. The note requires annual principal payments each December 31 of $80,000 plus interest at 5%. The entry to record the annual payment on December 31, 2019, includes
   a. a debit to Interest Expense for $36,000.
   b. a debit to Interest Expense for $40,000.
   c. a credit to Notes Payable for $80,000.
   d. a credit to Cash of $120,000.

Learning Objective 2

2. Daniels's bonds payable carry a stated interest rate of 5%, and the market rate of interest is 7%. The issue price of the Daniels's bonds will be at
   a. par value.
   b. a premium.
   c. face value.
   d. a discount.

Learning Objective 2

3. A bond that matures in installments at regular intervals is a
   a. term bond.
   b. serial bond.
   c. periodic bond.
   d. terminal bond.

Learning Objective 3

4. Alan Smith Antiques issued its 7%, 20-year bonds payable at a price of $846,720 (face value is $900,000). The company uses the straight-line amortization method for the bond discount or premium. Interest expense for each year is

a. $65,664.
b. $60,336.
c. $63,000.
d. $59,270.

Learning Objective 3

5. Nicholas Smith Fitness Gym has $700,000 of 20-year bonds payable outstanding. These bonds had a discount of $56,000 at issuance, which was 10 years ago. The company uses the straight-line amortization method. The current carrying amount of these bonds payable is

a. $672,000.
b. $644,000.
c. $700,000.
d. $728,000.

Learning Objective 4

6. Vasquez issued a $400,000 face value, 8%, 20-year bond at 95. Which of the following is the correct journal entry to record the retirement of the bond at maturity?

Date	Accounts and Explanation	Debit	Credit
a.	Bonds Payable	380,000	
	Cash		380,000
b.	Cash	400,000	
	Bonds Payable		400,000
c.	Bonds Payable	400,000	
	Cash		400,000
d.	Cash	380,000	
	Bonds Payable		380,000

Learning Objective 5

7. Sassy's trial balance shows $200,000 face value of bonds with a discount balance of $2,000. The bonds mature in 10 years. How will the bonds be presented on the balance sheet?

a. Bonds payable $198,000 (net of $2,000 discount) will be listed as a long-term liability.
b. Bonds payable $200,000 will be listed as a long-term liability. A $2,000 discount on bonds payable will be listed as a contra current liability.
c. Bonds payable $200,000 will be listed as a long-term liability.
d. Bonds payable $200,000 will be listed as a long-term liability. A $2,000 discount on bonds payable will be listed as a current liability.

Learning Objective 6

8. The debt to equity ratio is calculated as

a. Total assets / Total equity.
b. Current liabilities / Total equity.
c. Total liabilities / Total assets.
d. Total liabilities / Total equity.

Learning Objective 7 Appendix 12A

9A. Mike Gordon wishes to have $80,000 in five years. If he can earn annual interest of 2%, how much must he invest today?

a. $42,170
b. $72,480
c. $76,080
d. $88,320

CHAPTER 12

Learning Objective 8
Appendix 12B

10B. Hicks Corporation issued $500,000 of 5%, 10-year bonds payable at a price of 92. The market interest rate at the date of issuance was 6%, and the bonds pay interest semiannually. The journal entry to record the first semiannual interest payment using the effective-interest amortization method is

Date	Accounts and Explanation	Debit	Credit
a.	Interest Expense	14,500	
	Discount on Bonds Payable		2,000
	Cash		12,500
b.	Interest Expense	13,800	
	Discount on Bonds Payable		1,300
	Cash		12,500
c.	Interest Expense	17,000	
	Discount on Bonds Payable		2,000
	Cash		15,000
d.	Interest Expense	16,300	
	Discount on Bonds Payable		1,300
	Cash		15,000

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. Where is the current portion of notes payable reported on the balance sheet?
2. What is an amortization schedule?
3. What is a mortgage payable?
4. What is a bond payable?
5. What is the difference between the stated interest rate and the market interest rate?
6. When does a discount on bonds payable occur?
7. When does a premium on bonds payable occur?
8. When a bond is issued, what is its present value?
9. Why would a company choose to issue bonds instead of issuing stock?
10. What is the carrying amount of a bond?
11. In regard to a bond discount or premium, what is the straight-line amortization method?
12. What type of account is Discount on Bonds Payable? What is its normal balance? Is it added to or subtracted from the Bonds Payable account to determine the carrying amount?
13. What type of account is Premium on Bonds Payable? What is its normal balance? Is it added to or subtracted from the Bonds Payable account to determine the carrying amount?

14. What is the journal entry to retire bonds at maturity?

15. What does it mean when a company calls a bond?

16. What are the two categories of liabilities reported on the balance sheet? Provide examples of each.

17. What does the debt to equity ratio show, and how is it calculated?

18A. Explain each of the key factors that the time value of money depends on.

19A. What is an annuity?

20A. How does compound interest differ from simple interest?

21B. In regard to a bond discount or premium, what is the effective-interest amortization method?

> Short Exercises

Assume bonds payable are amortized using the straight-line amortization method unless stated otherwise.

S12-1 Accounting for a long-term note payable

Learning Objective 1

On January 1, 2018, Lakeman-Fay signed a $1,500,000, 15-year, 7% note. The loan required Lakeman-Fay to make annual payments on December 31 of $100,000 principal plus interest.

Requirements

1. Journalize the issuance of the note on January 1, 2018.
2. Journalize the first note payment on December 31, 2018.

S12-2 Accounting for mortgages payable

Learning Objective 1

Ember Company purchased a building with a market value of $280,000 and land with a market value of $55,000 on January 1, 2018. Ember Company paid $15,000 cash and signed a 25-year, 12% mortgage payable for the balance.

Requirements

1. Journalize the January 1, 2018, purchase.
2. Journalize the first monthly payment of $3,370 on January 31, 2018. (Round to the nearest dollar.)

S12-3 Determining bond prices

Learning Objective 2

Bond prices depend on the market rate of interest, stated rate of interest, and time. Determine whether the following bonds payable will be issued at face value, at a premium, or at a discount:

a. The market interest rate is 8%. Idaho issues bonds payable with a stated rate of 7.75%.

b. Austin issued 9% bonds payable when the market interest rate was 8.25%.

c. Cleveland's Cars issued 10% bonds when the market interest rate was 10%.

d. Atlanta's Tourism issued bonds payable that pay the stated interest rate of 8.5%. At issuance, the market interest rate was 10.25%.

Learning Objective 2

S12-4 Pricing bonds

Bond prices depend on the market rate of interest, stated rate of interest, and time.

Requirements

1. Compute the price of the following 8% bonds of Country Telecom.
   - **a.** $100,000 issued at 75.25
   - **b.** $100,000 issued at 103.50
   - **c.** $100,000 issued at 94.50
   - **d.** $100,000 issued at 103.25
2. Which bond will Country Telecom have to pay the most to retire at maturity? Explain your answer.

Learning Objective 3

S12-5 Determining bond amounts

Savvy Drive-Ins borrowed money by issuing $3,500,000 of 9% bonds payable at 99.5. Interest is paid semiannually.

Requirements

1. How much cash did Savvy receive when it issued the bonds payable?
2. How much must Savvy pay back at maturity?
3. How much cash interest will Savvy pay each six months?

Learning Objective 3

S12-6 Journalizing bond transactions

Power Company issued a $1,000,000, 5%, 5-year bond payable at face value on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest on July 1, 2018.

Learning Objective 3

S12-7 Journalizing bond transactions

Owen Company issued a $110,000, 11%, 10-year bond payable at 94 on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest and amortization of the bond discount or premium on July 1, 2018.

Learning Objective 3

S12-8 Journalizing bond transactions

Wilkes Mutual Insurance Company issued a $100,000, 5%, 10-year bond payable at 111 on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest and amortization of the bond discount or premium on July 1, 2018.

S12-9 Journalizing bond transactions including retirement at maturity

Learning Objectives 3, 4

McQueen Company issued a $100,000, 7.5%, 10-year bond payable. Journalize the following transactions for McQueen Company, and include an explanation for each entry:

a. Issuance of the bond payable at face value on January 1, 2018.

b. Payment of semiannual cash interest on July 1, 2018.

c. Payment of the bond payable at maturity, assuming the last interest payment had already been recorded. (Give the date.)

S12-10 Retiring bonds payable before maturity

Learning Objectives 3, 4

On January 1, 2018, Powell Company issued $350,000 of 10%, five-year bonds payable at 102. Powell Company has extra cash and wishes to retire the bonds payable on January 1, 2019, immediately after making the second semiannual interest payment. To retire the bonds, Powell Company pays the market price of 98.

Requirements

1. What is Powell Company's carrying amount of the bonds payable on the retirement date?
2. How much cash must Powell Company pay to retire the bonds payable?
3. Compute Powell Company's gain or loss on the retirement of the bonds payable.

S12-11 Preparing the liabilities section of the balance sheet

Learning Objective 5

Luxury Suites Hotels includes the following selected accounts in its general ledger at December 31, 2018:

Notes Payable (long-term)	$ 200,000	Accounts Payable	$ 33,000
Bonds Payable (due 2022)	450,000	Discount on Bonds Payable	13,500
Interest Payable (due next year)	1,000	Salaries Payable	2,600
Estimated Warranty Payable	1,300	Sales Tax Payable	400

Prepare the liabilities section of Luxury Suites's balance sheet at December 31, 2018.

S12-12 Computing the debt to equity ratio

Learning Objective 6

Jackson Corporation has the following amounts as of December 31, 2018.

Total assets	$ 55,250
Total liabilities	22,750
Total equity	32,500

Compute the debt to equity ratio at December 31, 2018.

S12A-13 Determining present value

Learning Objective 7
Appendix 12A

Your grandfather would like to share some of his fortune with you. He offers to give you money under one of the following scenarios (you get to choose):

1. $8,750 per year at the end of each of the next six years
2. $49,650 (lump sum) now
3. $100,450 (lump sum) six years from now

Requirements

1. Calculate the present value of each scenario using a 6% discount rate. Which scenario yields the highest present value? Round to the nearest dollar.
2. Would your preference change if you used a 12% discount rate?

Learning Objective 7
Appendix 12A

S12A-14 Determining the present value of bond at issuance

On December 31, 2018, when the market interest rate is 12%, Benson Realty issues $600,000 of 9.25%, 10-year bonds payable. The bonds pay interest semiannually. Determine the present value of the bonds at issuance.

Learning Objective 7
Appendix 12A

S12A-15 Determining future value

David is entering high school and is determined to save money for college. David feels he can save $5,000 each year for the next four years from his part-time job. If David is able to invest at 6%, how much will he have when he starts college?

Learning Objective 8
Appendix 12B

S12B-16 Using the effective-interest amortization method

On December 31, 2018, when the market interest rate is 8%, Biggs Realty issues $450,000 of 5.25%, 10-year bonds payable. The bonds pay interest semiannually. The present value of the bonds at issuance is $365,732.

Requirements

1. Prepare an amortization table using the effective interest amortization method for the first two semiannual interest periods. (Round to the nearest dollar.)
2. Using the amortization table prepared in Requirement 1, journalize issuance of the bonds and the first two interest payments.

Learning Objective 8
Appendix 12B

S12B-17 Using the effective-interest amortization method

On December 31, 2018, when the market interest rate is 6%, Benson Realty issues $700,000 of 6.25%, 10-year bonds payable. The bonds pay interest semiannually. Benson Realty received $713,234 in cash at issuance.

Requirements

1. Prepare an amortization table using the effective interest amortization method for the first two semiannual interest periods. (Round to the nearest dollar.)
2. Using the amortization table prepared in Requirement 1, journalize issuance of the bonds and the first two interest payments.

> Exercises

Assume bonds payable are amortized using the straight-line amortization method unless stated otherwise.

E12-18 Accounting for long-term notes payable transactions

Learning Objective 1

2. Total Liabilities $65,280

Consider the following note payable transactions of Caleb Video Productions.

2018	
Oct. 1	Purchased equipment costing $80,000 by issuing a five-year, 8% note payable. The note requires annual principal payments of $16,000 plus interest each October 1.
Dec. 31	Accrued interest on the note payable.
2019	
Oct. 1	Paid the first installment on the note.
Dec. 31	Accrued interest on the note payable.

Requirements

1. Journalize the transactions for the company.
2. Considering the given transactions only, what are Caleb Video Productions' total liabilities on December 31, 2019?

E12-19 Preparing an amortization schedule and recording mortgages payable entries

Learning Objective 1

3. Interest Expense $2,750.00

Kellerman Company purchased a building and land with a fair market value of $550,000 (building, $425,000, and land, $125,000) on January 1, 2018. Kellerman signed a 20-year, 6% mortgage payable. Kellerman will make monthly payments of $3,940.37. Round to two decimal places. Explanations are not required for journal entries.

Requirements

1. Journalize the mortgage payable issuance on January 1, 2018.
2. Prepare an amortization schedule for the first two payments.
3. Journalize the first payment on January 31, 2018.
4. Journalize the second payment on February 28, 2018.

CHAPTER 12

E12-20 Analyzing alternative plans to raise money

Learning Objective 2

EPS Plan A $1.96

SB Electronics is considering two plans for raising $4,000,000 to expand operations. Plan A is to issue 9% bonds payable, and plan B is to issue 500,000 shares of common stock. Before any new financing, SB Electronics has net income of $350,000 and 300,000 shares of common stock outstanding. Management believes the company can use the new funds to earn additional income of $700,000 before interest and taxes. The income tax rate is 30%. Analyze the SB Electronics situation to determine which plan will result in higher earnings per share. Use Exhibit 12-6 as a guide.

E12-21 Determining bond prices and interest expense

Learning Objectives 2, 3

2. Market price $436,100

Jones Company is planning to issue $490,000 of 9%, five-year bonds payable to borrow for a major expansion. The owner, Shane Jones, asks your advice on some related matters.

Requirements

1. Answer the following questions:
   a. At what type of bond price will Jones Company have total interest expense equal to the cash interest payments?
   b. Under which type of bond price will Jones Company's total interest expense be greater than the cash interest payments?
   c. If the market interest rate is 12%, what type of bond price can Jones Company expect for the bonds?
2. Compute the price of the bonds if the bonds are issued at 89.
3. How much will Jones Company pay in interest each year? How much will Jones Company's interest expense be for the first year?

Learning Objective 3

2. Interest Exp. $6,600

E12-22 Journalizing bond issuance and interest payments

On June 30, Parker Company issues 11%, five-year bonds payable with a face value of $120,000. The bonds are issued at face value and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on June 30.
2. Journalize the semiannual interest payment on December 31.

Learning Objective 3

1. June 30 Discount $18,200

E12-23 Journalizing bond issuance and interest payments

On June 30, Daughtry Limited issues 8%, 20-year bonds payable with a face value of $130,000. The bonds are issued at 86 and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on June 30.
2. Journalize the semiannual interest payment and amortization of bond discount on December 31.

Learning Objective 3

2. Interest Expense $3,430

E12-24 Journalizing bond transactions

Anderson Company issued $70,000 of 10-year, 9% bonds payable on January 1, 2018. Anderson Company pays interest each January 1 and July 1 and amortizes discount or premium by the straight-line amortization method. The company can issue its bonds payable under various conditions.

Requirements

1. Journalize Anderson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at face value. Explanations are not required.
2. Journalize Anderson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at 92. Explanations are not required.
3. Journalize Anderson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at 103. Explanations are not required.
4. Which bond price results in the most interest expense for Anderson Company? Explain in detail.

E12-25 Journalizing bond issuance and interest payments

Learning Objectives 3, 4

1. Premium $9,600

On January 1, 2018, Roberts Unlimited issues 8%, 20-year bonds payable with a face value of $240,000. The bonds are issued at 104 and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on January 1, 2018.
2. Journalize the semiannual interest payment and amortization of bond premium on June 30, 2018.
3. Journalize the semiannual interest payment and amortization of bond premium on December 31, 2018.
4. Journalize the retirement of the bond at maturity, assuming the last interest payment has already been recorded. (Give the date.)

E12-26 Retiring bonds payable before maturity

Learning Objective 4

2. Cash $606,000

CoastalView Magazine issued $600,000 of 15-year, 5% callable bonds payable on July 31, 2018, at 94. On July 31, 2021, *CoastalView* called the bonds at 101. Assume annual interest payments.

Requirements

1. Without making journal entries, compute the carrying amount of the bonds payable at July 31, 2021.
2. Assume all amortization has been recorded properly. Journalize the retirement of the bonds on July 31, 2021. No explanation is required.

E12-27 Reporting current and long-term liabilities

Learning Objectives 2, 3, 5

Pediatric Dispensary borrowed $390,000 on January 2, 2018, by issuing a 15% serial bond payable that must be paid in three equal annual installments plus interest for the year. The first payment of principal and interest comes due January 2, 2019. Complete the missing information. Assume the bonds are issued at face value.

	December 31		
	2018	2019	2020
Current Liabilities:			
Bonds Payable	$______	$______	$______
Interest Payable	______	______	______
Long-term Liabilities:			
Bonds Payable	______	______	______

E12-28 Reporting liabilities

Learning Objectives 2, 3, 5

Total Liabilities $378,000

At December 31, MediStat Precision Instruments owes $52,000 on Accounts Payable, Salaries Payable of $12,000, and Income Tax Payable of $10,000. MediStat also has $300,000 of Bonds Payable that were issued at face value that require payment of a $35,000 installment next year and the remainder in later years. The bonds payable require an annual interest payment of $4,000, and MediStat still owes this interest for the current year. Report MediStat's liabilities on its classified balance sheet on December 31, 2018.

Learning Objective 6

E12-29 Computing the debt to equity ratio

Ludwig Corporation has the following data as of December 31, 2018:

Total Current Liabilities	$ 36,210	Total Stockholders' Equity	$?
Total Current Assets	58,200	Other Assets	36,800
Long-term Liabilities	139,630	Property, Plant, and Equipment, Net	206,440

Compute the debt to equity ratio at December 31, 2018.

Learning Objective 7
Appendix 12A

2. Present Value $77,594

E12A-30 Determining the present value of bonds payable

Interest rates determine the present value of future amounts. (Round to the nearest dollar.)

Requirements

1. Determine the present value of 10-year bonds payable with face value of $86,000 and stated interest rate of 14%, paid semiannually. The market rate of interest is 14% at issuance.
2. Same bonds payable as in Requirement 1, but the market interest rate is 16%.
3. Same bonds payable as in Requirement 1, but the market interest rate is 12%.

Learning Objective 8
Appendix 12B

2. Interest Expense $4,995

E12B-31 Journalizing bond transactions using the effective-interest amortization method

Journalize issuance of the bond and the first semiannual interest payment under each of the following three assumptions. The company amortizes bond premium and discount by the effective-interest amortization method. Explanations are not required.

1. Seven-year bonds payable with face value of $83,000 and stated interest rate of 10%, paid semiannually. The market rate of interest is 10% at issuance. The present value of the bonds at issuance is $83,000.
2. Same bonds payable as in assumption 1, but the market interest rate is 16%. The present value of the bonds at issuance is $62,433.
3. Same bonds payable as in assumption 1, but the market interest rate is 8%. The present value of the bonds at issuance is $91,727.

> Problems Group A

P12-32A Journalizing liability transactions and reporting them on the balance sheet

Learning Objectives 1, 5

2. Total Liabilities $653,334

The following transactions of Johnson Pharmacies occurred during 2018 and 2019:

2018	
Mar. 1	Borrowed $450,000 from Coconut Creek Bank. The 15-year, 5% note requires payments due annually, on March 1. Each payment consists of $30,000 principal plus one year's interest.
Dec. 1	Mortgaged the warehouse for $250,000 cash with Saputo Bank. The mortgage requires monthly payments of $8,000. The interest rate on the note is 12% and accrues monthly. The first payment is due on January 1, 2019.
31	Recorded interest accrued on the Saputo Bank note.
31	Recorded interest accrued on the Coconut Creek Bank note.
2019	
Jan. 1	Paid Saputo Bank monthly mortgage payment.
Feb. 1	Paid Saputo Bank monthly mortgage payment.
Mar. 1	Paid Saputo Bank monthly mortgage payment.
1	Paid first installment on note due to Coconut Creek Bank.

Requirements

1. Journalize the transactions in the Johnson Pharmacies general journal. Round to the nearest dollar. Explanations are not required.
2. Prepare the liabilities section of the balance sheet for Johnson Pharmacies on March 1, 2019 after all the journal entries are recorded.

P12-33A Analyzing, journalizing, and reporting bond transactions

Learning Objectives 2, 3

2. Discount $3,000

Danny's Hamburgers issued 6%, 10-year bonds payable at 90 on December 31, 2018. At December 31, 2020, Danny reported the bonds payable as follows:

Long-term Liabilities:		
Bonds Payable	$ 600,000	
Less: Discount on Bonds Payable	(48,000)	$ 552,000

Danny's pays semiannual interest each June 30 and December 31.

Requirements

1. Answer the following questions about Danny's bonds payable:
   a. What is the maturity value of the bonds?
   b. What is the carrying amount of the bonds at December 31, 2020?
   c. What is the semiannual cash interest payment on the bonds?
   d. How much interest expense should the company record each year?
2. Record the June 30, 2020, semiannual interest payment and amortization of discount.

CHAPTER 12

Learning Objectives 2, 3, 4

3. June 30, 2018, Interest Expense $25,200

P12-34A Analyzing and journalizing bond transactions

On January 1, 2018, Nurses Credit Union (NCU) issued 8%, 20-year bonds payable with face value of $600,000. The bonds pay interest on June 30 and December 31.

Requirements

1. If the market interest rate is 7% when NCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
2. If the market interest rate is 9% when NCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
3. The issue price of the bonds is 92. Journalize the following bond transactions:
   - **a.** Issuance of the bonds on January 1, 2018.
   - **b.** Payment of interest and amortization on June 30, 2018.
   - **c.** Payment of interest and amortization on December 31, 2018.
   - **d.** Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

Learning Objectives 2, 3, 4

June 30, 2018, Interest Expense $37,750

P12-35A Analyzing and journalizing bond transactions

On January 1, 2018, Educators Credit Union (ECU) issued 8%, 20-year bonds payable with face value of $1,000,000. These bonds pay interest on June 30 and December 31. The issue price of the bonds is 109.

Journalize the following bond transactions:

- **a.** Issuance of the bonds on January 1, 2018.
- **b.** Payment of interest and amortization on June 30, 2018.
- **c.** Payment of interest and amortization on December 31, 2018.
- **d.** Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

CHAPTER 12

Learning Objectives 5, 6

1. Total Liabilities $276,200

P12-36A Reporting liabilities on the balance sheet and computing debt to equity ratio

The accounting records of Pack Leader Wireless include the following as of December 31, 2018:

Accounts Payable	$ 77,000	Salaries Payable	$ 7,500
Mortgages Payable (long-term)	73,000	Bonds Payable (current portion)	25,000
Interest Payable	18,000	Premium on Bonds Payable	10,000
Bonds Payable (long-term)	63,000	Unearned Revenue (short-term)	2,700
Total Stockholders' Equity	140,000		

Requirements

1. Report these liabilities on the Pack Leader Wireless balance sheet, including headings and totals for current liabilities and long-term liabilities.
2. Compute Pack Leader Wireless's debt to equity ratio at December 31, 2018.

Learning Objectives 7, 8 Appendixes 12A, 12B

3. Jan. 1, 2018, Cash $629,634

P12AB-37A Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Brad Nelson, Inc. issued $600,000 of 7%, six-year bonds payable on January 1, 2018. The market interest rate at the date of issuance was 6%, and the bonds pay interest semiannually.

Requirements

1. How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
2. Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
3. Journalize the issuance of the bonds on January 1, 2018, and the first and second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

P12AB-38A Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Learning Objectives 7, 8
Appendixes 12A, 12B

3. Jan. 1, 2018, Cash $214,035

Relaxation, Inc. is authorized to issue 7%, 10-year bonds payable. On January 1, 2018, when the market interest rate is 12%, the company issues $300,000 of the bonds. The bonds pay interest semiannually.

Requirements

1. How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
2. Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
3. Journalize the issuance of the bonds on January 1, 2018, and the first and second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

> Problems Group B

P12-39B Journalizing liability transactions and reporting them on the balance sheet

Learning Objectives 1, 5

2. Total Liabilities $661,776

The following transactions of Great Value Pharmacies occurred during 2018 and 2019:

2018	
Mar. 1	Borrowed $390,000 from Bartow Bank. The six-year, 13% note requires payments due annually, on March 1. Each payment consists of $65,000 principal plus one year's interest.
Dec. 1	Mortgaged the warehouse for $350,000 cash with Saylor Bank. The mortgage requires monthly payments of $7,000. The interest rate on the note is 9% and accrues monthly. The first payment is due on January 1, 2019.
31	Recorded interest accrued on the Saylor Bank note.
31	Recorded interest accrued on the Bartow Bank note.
2019	
Jan. 1	Paid Saylor Bank monthly mortgage payment.
Feb. 1	Paid Saylor Bank monthly mortgage payment.
Mar. 1	Paid Saylor Bank monthly mortgage payment.
1	Paid first installment on note due to Bartow Bank.

Requirements

1. Journalize the transactions in the Great Value Pharmacies general journal. Round to the nearest dollar. Explanations are not required.
2. Prepare the liabilities section of the balance sheet for Great Value Pharmacies on March 1, 2019 after all the journal entries are recorded.

CHAPTER 12

Learning Objectives 2, 3

2. Discount $2,250

P12-40B Analyzing, journalizing, and reporting bond transactions

Johnny's Hamburgers issued 8%, 10-year bonds payable at 85 on December 31, 2018. At December 31, 2020, Johnny reported the bonds payable as follows:

Long-term Liabilities:		
Bonds Payable	$ 300,000	
Less: Discount on Bonds Payable	(36,000)	$ 264,000

Johnny pays semiannual interest each June 30 and December 31.

Requirements

1. Answer the following questions about Johnny's bonds payable:
   a. What is the maturity value of the bonds?
   b. What is the carrying amount of the bonds at December 31, 2020?
   c. What is the semiannual cash interest payment on the bonds?
   d. How much interest expense should the company record each year?
2. Record the June 30, 2020, semiannual interest payment and amortization of discount.

Learning Objectives 2, 3, 4

3. June 30 Interest Expense $7,350

P12-41B Analyzing and journalizing bond transactions

On January 1, 2018, Doctors Credit Union (DCU) issued 7%, 20-year bonds payable with face value of $200,000. The bonds pay interest on June 30 and December 31.

Requirements

1. If the market interest rate is 5% when DCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
2. If the market interest rate is 8% when DCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
3. The issue price of the bonds is 93. Journalize the following bond transactions:
   a. Issuance of the bonds on January 1, 2018.
   b. Payment of interest and amortization on June 30, 2018.
   c. Payment of interest and amortization on December 31, 2018.
   d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

Learning Objectives 2, 3, 4

June 30 Interest Expense $15,600

P12-42B Analyzing and journalizing bond transactions

On January 1, 2018, Electricians Credit Union (ECU) issued 8%, 20-year bonds payable with face value of $400,000. The bonds pay interest on June 30 and December 31. The issue price of the bonds is 104.

Journalize the following bond transactions:

a. Issuance of the bonds on January 1, 2018.
b. Payment of interest and amortization on June 30, 2018.
c. Payment of interest and amortization on December 31, 2018.
d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

P12-43B Reporting liabilities on the balance sheet and computing debt to equity ratio

Learning Objectives 5, 6

1. Total Liabilities $286,200

The accounting records of Compass Wireless include the following as of December 31, 2018:

Accounts Payable	$ 74,000	Salaries Payable	$ 7,500
Mortgages Payable (long-term)	80,000	Bonds Payable (current portion)	25,000
Interest Payable	21,000	Premium on Bonds Payable	13,000
Bonds Payable (long-term)	63,000	Unearned Revenue (short-term)	2,700
Total Stockholders' Equity	145,000		

Requirements

1. Report these liabilities on the Compass Wireless balance sheet, including headings and totals for current liabilities and long-term liabilities.
2. Compute Compass Wireless's debt to equity ratio at December 31, 2018.

P12AB-44B Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Learning Objectives 7, 8
Appendixes 12A, 12B

3. Jan. 1, 2018, Cash $311,613

Ari Goldstein issued $300,000 of 11%, five-year bonds payable on January 1, 2018. The market interest rate at the date of issuance was 10%, and the bonds pay interest semiannually.

Requirements

1. How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
2. Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
3. Journalize the issuance of the bonds on January 1, 2018, and the first second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

P12AB-45B Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Learning Objectives 7, 8
Appendixes 12A, 12B

3. Jan. 1, 2018, Cash $468,895

Sleep Well, Inc. is authorized to issue 9%, 10-year bonds payable. On January 1, 2018, when the market interest rate is 10%, the company issues $500,000 of the bonds. The bonds pay interest semiannually.

Requirements

1. How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
2. Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
3. Journalize the issuance of the bonds on January 1, 2018, and the first and second payment of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

CRITICAL THINKING

> Using Excel

P12-46 Using Excel for long-term notes payable amortization schedule

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Patrick's Delivery Services is buying a van to help with deliveries. The cost of the vehicle is $35,000, the interest rate is 6%, and the loan is for three years. The van is to be repaid in three equal installment payments. Payments are due at the end of each year.

Requirements

1. Complete the data table.

2. Using the present value of an ordinary annuity table, calculate the payment amount and complete the amortization schedule.

  a. Calculate the loan payment by dividing the loan amount by the appropriate present value factor.

  b. Round values to two decimal places and ignore rounding errors on the last payment.

  c. Use absolute cell references and relative cell references in formulas.

3. Using the Excel PMT function, calculate the payment amount and complete the amortization schedule.

  a. The PMT function calculates a payment amount that results in a negative number. Reverse this to a positive number for calculations in the amortization schedule.

  b. Round values to two decimal places and ignore rounding errors on the last payment.

  c. Use absolute cell references and relative cell references in formulas.

> Continuing Problem

P12-47 Describing bonds, journalizing transactions for bonds payable using the straight-line amortization method, and journalizing transactions for a mortgage payable

This problem continues the Canyon Canoe Company situation from Chapter 11. Canyon Canoe Company is considering raising additional capital for further expansion. The company wants to finance a new business venture into guided trips down the Amazon River in South America. Additionally, the company wants to add another building on their land to offer more services for local customers.

Canyon Canoe Company plans to raise the capital by issuing $210,000 of 7.5%, six-year bonds on January 2, 2020. The bonds pay interest semiannually on June 30 and December 31. The company receives $208,476 when the bonds are issued.

The company also issues a mortgage payable for $450,000 on January 2, 2020. The proceeds from the mortgage will be used to construct the new building. The mortgage requires annual payments of $45,000 plus interest for ten years, payable on December 31. The mortgage interest rate is 8%.

Requirements

1. Will the bonds issue at face value, a premium, or a discount?

2. Record the following transactions. Include dates and round to the nearest dollar. Omit explanations.

  a. Cash received from the bond issue.

  b. Cash received from the mortgage payable.

c. Semiannual bond interest payments for 2020. Amortize the premium or discount using the straight-line amortization method.

d. Payment on the mortgage payable for 2020.

3. Calculate the total interest expense incurred in 2020.

> Tying It All Together Case 12-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review The Walt Disney Company's 2015 annual report (https://www.sec.gov/Archives/edgar/data/1001039/000100103915000255/fy2015_q4x10k.htm).

The Walt Disney Company is a diversified entertainment company that is comprised of five different business segments. Walt Disney began as a cartoon studio in 1920 and today is known as a leading worldwide entertainment provider.

Requirements

1. On The Walt Disney Company's balance sheet dated October 3, 2015, the company reports borrowings of $12,773 million. Review Note 8 (Borrowings) of the company's annual report. What are the different types of borrowings the company holds?
2. Perform a web search for the terms commercial paper and U.S. medium-term notes. What do each of these terms mean?
3. Review the information included in Note 8. What are the maturity dates for The Walt Disney Company's U.S. medium-term notes?

> Decision Case 12-1

The following questions are not related.

Requirements

1. Duncan Brooks needs to borrow $500,000 to open new stores. Brooks can borrow $500,000 by issuing 5%, 10-year bonds at 96. How much will Brooks actually receive in cash under this arrangement? How much must Brooks pay back at maturity? How will Brooks account for the difference between the cash received on the issue date and the amount paid back?
2. Brooks prefers to borrow for longer periods when interest rates are low and for shorter periods when interest rates are high. Why is this a good business strategy?

> Ethical Issue 12-1

Raffie's Kids, a nonprofit organization that provides aid to victims of domestic violence, low-income families, and special-needs children, has a 30-year, 5% mortgage on the existing building. The mortgage requires monthly payments of $3,000. Raffie's bookkeeper is preparing financial statements for the board and, in doing so, lists the mortgage balance of $287,000 under current liabilities because the board hopes to be able to pay the mortgage off in full next year. Of the mortgage principal, $20,000 will be paid next year if Raffie's pays according to the mortgage agreement. The board members call you, their trusted CPA, to advise them on how Raffie's Kids should report the mortgage on its balance sheet. What is the ethical issue? Provide and discuss the reason for your recommendation.

> Fraud Case 12-1

Bill and Edna had been married two years and had just reached the point where they had enough savings to start investing. Bill's uncle Dave told them that he had recently inherited some very rare railroad bonds from his grandmother's estate. He wanted to help Bill and Edna get a start in the world and would sell them 50 of the bonds at $100 each. The bonds were dated 1873, beautifully engraved, showing a face value of $1,000 each. Uncle Dave pointed out that "United States of America" was printed prominently at the top and that the U.S. government had established a sinking fund to retire the old railroad bonds. A sinking fund is a fund established for the purpose of repaying the debt. It allows the organization (the U.S. government, in this example) to set aside money over time to retire the bonds. All Bill and Edna needed to do was hold on to them until the government contacted them, and they would eventually get the full $1,000 for each bond. Bill and Edna were overjoyed—until a year later when they saw the exact same bonds for sale at a coin and stamp shop priced as "collectors' items" for $9.95 each!

Requirements

1. If a company goes bankrupt, what happens to the bonds it issued and the investors who bought the bonds?
2. When investing in bonds, how can you tell whether the bond issue is a legitimate transaction?
3. Is there a way to determine the relative risk of corporate bonds?

> Financial Statement Case 12-1

Use the **Target Corporation** financial statements to answer the following questions. Visit http://www.pearsonhighered.com/Horngren to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. How much was Target Corporation's long-term debt at January 30, 2016?
2. Compute Target Corporation's debt to equity ratio at January 30, 2016. How does it compare to **Kohl's Corporation's** ratio?

> Quick Check Answers

1. a **2.** d **3.** b **4.** a **5.** a **6.** c **7.** a **8.** d **9A.** b **10B.** b

Chapter 12
Long-Term Liabilities

Review Questions

1. The current portion of notes payable is reported in the current liability section of the balance sheet.

2. An amortization schedule details each loan payment's allocation between principal and interest and the beginning and ending loan balances.

3. Mortgages payable is a long-term debt that is backed with a security interest in specific property.

4. A bond payable is a long-term debt issued to multiple lenders called bondholders, usually in increments of $1,000 per bond.

5. The stated interest rate is the interest rate that determines the amount of cash interest the borrower pays and the investor receives each year. The stated rate is the rate of interest actually designated on the face of a bond. The market interest rate is the rate that investors demand to earn for loaning their money. The market interest rate varies constantly.

6. A discount on bonds payable occurs when a bond's issue price is less than the face value. This occurs because the stated rate of interest is less than the market rate of interest.

7. A premium on bonds payable occurs when a bond's issue price is greater than the face value. This occurs because the stated rate of interest exceeds the market rate of interest.

8. When a bond is issued, its present value is the bond's market price. The price is equal to the present value of the principal plus the present value of the stated interest payments.

9. A company may issue bonds instead of stock because the interest on the bonds is tax deductible and dividends are not, and bonds do not affect the percentage of ownership of the corporation. In addition, earnings per share will increase with bonds.

10. The carrying amount of a bond is the bond payable minus the current balance in the discount account or plus the current balance in the premium account.

11. The straight-line amortization method allocates an equal amount of bond discount or premium to each interest period over the life of the bond. The calculation is the amount of the discount or premium over the number of interest payments over the bond's term.

12. Discount on Bonds Payable is a contra account to Bonds Payable. The normal balance of the Discount on Bonds Payable is a debit, and it is subtracted from the Bonds Payable account to determine the carrying amount.

13. Premium on Bonds Payable is an adjunct account to Bonds Payable. The normal balance of the Premium on Bonds Payable is a credit, and it is added to the Bonds Payable account to determine the carrying amount.

14. The journal entry to retire bonds at maturity is a debit to Bonds Payable and a credit to Cash.

15. When a company calls a bond, it means they pay it off before maturity at a specific price.

16. The two categories of liabilities reported on the balance sheet are current and long-term. Accounts payable, payroll-related liabilities, or the current portion of long-term debt are all examples of a current liability. An example of a long-term liability is mortgages payable or bonds payable.

17. The debt to equity ratio shows the relationship between total liabilities and total equity. It is calculated by taking total liabilities and dividing them by total equity.

18A. The time value of money depends on these key factors:

a. The principal amount (*p*)—the amount of the investment or borrowing.
b. The number of periods (*n*)—the length of time from the beginning of the investment until termination.
c. The interest rate (*i*)—the percentage earned on the investment. The interest rate can be stated annually or in days, months, or quarters.

19A. An annuity is a stream of equal cash payments made at equal time intervals.

20A. Compound interest means that interest is calculated on the principal and on all previously earned interest. Simple interest means that interest is calculated only on the principal amount.

21B. The effective-interest amortization method calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium.

Short Exercises

S12-1
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash	1,500,000	
	Notes Payable		1,500,000
	Received cash in exchange for a 10-year, 7% note.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Notes Payable	100,000	
	Interest Expense ($1,500,000 × 0.07 × 1 year)	105,000	
	Cash		205,000
	Paid principal and interest payment.		

S12-2
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Building	280,000	
	Land	55,000	
	Mortgages Payable		320,000
	Cash		15,000
	Purchased building and land with mortgages payable and cash payment.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jan. 31	Mortgages Payable ($3,370 − $3,200)	170	
	Interest Expense (320,000 × 0.12 × 1/12)	3,200	
	Cash		3,370
	Paid principal and interest payment.		

S12-3

a. discount
b. premium
c. face value
d. discount

S12-4
Requirement 1

	Face Value	×	Issue Price	=	Market Price
a.	$100,000	×	0.7525	=	$ 75,250
b.	$100,000	×	1.0350	=	103,500
c.	$100,000	×	0.9450	=	94,500
d.	$100,000	×	1.0325	=	103,250

Requirement 2

Country Telecom will have to pay $100,000 at maturity for all four of the bonds. They all have the same maturity value (face value).

S12-5
Requirement 1

Face value	×	Issue price	=	Cash received
$3,500,000	×	0.995	=	$3,482,500

Requirement 2

Savvy will have to pay back $3,500,000 at maturity.

Requirement 3

Savvy will pay $157,500 in interest payments every six months.

Face value	×	Interest rate	×	Time period	=	Interest payment
$3,500,000	×	0.09	×	6/12	=	$157,500

S12-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash	1,000,000	
	Bonds Payable		1,000,000
	Issued bonds at face value.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Interest Expense	25,000	
	Cash ($1,000,000 × 0.05 × 6/12)		25,000
	Paid semiannual interest.		

S12-7
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash ($110,000 × 0.94)	103,400	
	Discount on Bonds Payable ($110,000 – $103,400)	6,600	
	Bonds Payable		110,000
	Issued bonds at a discount.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Interest Expense ($6,050 + $330)	6,380	
	Discount on Bonds Payable ($6,600 × 1/20)		330
	Cash ($110,000 × 0.11 × 6/12)		6,050
	Paid semiannual interest and amortized discount.		

S12-8

Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash ($100,000 × 1.11)	111,000	
	Premium on Bonds Payable ($111,000 – $100,000)		11,000
	Bonds Payable		100,000
	Issued bonds at a premium.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Interest Expense ($2,500 − $550)	1,950	
	Premium on Bonds Payable ($11,000 × 1/20)	550	
	Cash ($100,000 × 0.05 × 6/12)		2,500
	Paid semiannual interest and amortized premium.		

S12-9

Date	Accounts and Explanation	Debit	Credit
2018			
a. Jan. 1	Cash	100,000	
	Bonds Payable		100,000
	Issued bonds at par.		
b. July 1	Interest Expense	3,750	
	Cash ($100,000 × 0.075 × 6/12)		3,750
	Paid semiannual interest payment.		
2028			
c. Jan. 1	Bonds Payable	100,000	
	Cash		100,000
	Retired bonds payable at maturity.		

S12-10
Requirement 1

Face value	×	Issue price	Market price or Cash received	Premium on bond
$350,000	×	1.02	$357,000	$7,000

Amortization of bond premium $7,000 / 10 periods = $700 per interest payment

Face value of the bonds being retired	$ 350,000
Plus: Premium ($7,000 – ($700 × 2))	5,600
Carrying amount of bonds payable on the retirement date	$ 355,600

Requirement 2

Market price paid to retire the bonds ($350,000 × 0.98)	$ 343,000

Requirement 3

Carrying amount of bonds payable (Requirement 1)	$ 355,600
Market price paid to retire the bonds (Requirement 2)	343,000
Gain on retirement of bonds payable	$ 12,600

S12-11

LUXURY SUITES HOTELS
Balance Sheet (Partial)
December 31, 2018

Liabilities

Current Liabilities			
Accounts Payable		$ 33,000	
Salaries Payable		2,600	
Sales Tax Payable		400	
Interest Payable		1,000	
Estimated Warranty Payable		1,300	
Total Current Liabilities			$ 38,300
Long-term Liabilities			
Notes Payable		200,000	
Bonds Payable	$ 450,000		
Less: Discount on Bonds Payable	(13,500)	436,500	
Total Long-term Liabilities			636,500
Total Liabilities			$ 674,800

S12-12

Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$22,750	/	$32,500
	=	0.70		

S12A-13
Requirement 1

Scenario 1	Present value	=	Amount of each cash inflow	×	Annuity PV factor for *i* =6%, *n* = 6
		=	$8,750	×	4.917
		=	$43,024		

Scenario 2	Present value	=	Lump sum now
		=	$49,650

Scenario 3	Present value	=	Future value	×	PV factor for *i* =6%, *n* = 6
		=	$100,450	×	0.705
		=	$70,817		

Scenario 3 has the highest present value.

S12A-13, cont.
Requirement 2

Scenario 1	Present value	=	Amount of each cash inflow	×	Annuity PV factor for *i =12%, n = 6*
		=	$8,750	×	4.111
		=	$35,971		

Scenario 2	Present value	=	Lump sum now
		=	$49,650

Scenario 3	Present value	=	Future value	×	PV factor for *i =12%, n = 6*
		=	$100,450	×	0.507
		=	$50,928		

Using a 12% discount rate would not change the preference in this problem.

S12A-14

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	$600,000	×	0.312
	=	$187,200		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	($600,000 × 0.0925 × 6/12)	×	
	=	$27,750	×	11.470
	=	$318,293		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$187,200	+	$318,293
	=	$505,493		

S12A-15

Future value	=	Amount of each cash inflow	×	Annuity FV factor for *i* =6%, *n* = 4
	=	$5,000	×	4.375
	=	$21,875		

S12B-16
Requirement 1

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
12/31/2018				$ 365,732
06/30/2019	$ 11,813	$ 14,629	$ 2,816	368,548
12/31/2019	11,813	14,742	2,929	371,477

Cash Paid	=	Face value	×	Stated interest rate	×	Time		
	=	$450,000	×	0.0525	×	6/12	=	$11,813

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2019	=	$365,732	×	0.08	×	6/12	=	$14,629
12/31/2019	=	$368,548	×	0.08	×	6/12	=	$14,742

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Cash	365,732	
	Discount on Bonds Payable ($450,000 − $365,732)	84,268	
	Bonds Payable		450,000
	Issued bonds at discount.		
2019			
Jun. 30	Interest Expense	14,629	
	Discount on Bonds Payable		2,816
	Cash		11,813
	Paid semiannual interest payment and amortized discount.		
Dec. 31	Interest Expense	14,742	
	Discount on Bonds Payable		2,929
	Cash		11,813
	Paid semiannual interest payment and amortized discount.		

S12B-17
Requirement 1

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
12/31/2018				$ 713,234
06/30/2019	$ 21,875	$ 21,397	$ 478	712,756
12/31/2019	21,875	21,383	492	712,264

Cash Paid	=	Face value	×	Stated interest rate	×	Time
	=	$700,000	×	0.0625	×	6/12
	=	$21,875				

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2019	=	$713,234	×	0.06	×	6/12	=	$21,397
12/31/2019	=	$712,756	×	0.06	×	6/12	=	$21,383

Requirement 2

Date	**Accounts and Explanation**	**Debit**	**Credit**
2018			
Dec. 31	Cash	713,234	
	Premium on Bonds Payable ($713,234 − $700,000)		13,234
	Bonds Payable		700,000
	Issued bonds at premium.		
2019			
Jun. 30	Interest Expense	21,397	
	Premium on Bonds Payable	478	
	Cash		21,875
	Paid semiannual interest payment and amortized premium.		
Dec. 31	Interest Expense	21,383	
	Premium on Bonds Payable	492	
	Cash		21,875
	Paid semiannual interest payment and amortized premium.		

Exercises

E12-18
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Oct. 1	Equipment	80,000	
	Notes Payable		80,000
	Purchased equipment by issuing an 5-year, 8% note.		
Dec. 31	Interest Expense ($80,000 × 0.08 × 3/12)	1,600	
	Interest Payable		1,600
	Recognized accrued interest.		
2019			
Oct. 1	Interest Expense ($80,000 × 0.08 × 9/12)	4,800	
	Interest Payable	1,600	
	Notes Payable	16,000	
	Cash		22,400
	Paid first installment of note.		
Dec. 31	Interest Expense ($64,000 × 0.08 × 3/12)	1,280	
	Interest Payable		1,280
	Recognized accrued interest.		

Requirement 2

	December 31, 2019
Interest Payable	$ 1,280
Notes Payable	64,000
Total liabilities	$ 65,280

E12-19
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Building	425,000	
	Land	125,000	
	Mortgages Payable		550,000

Requirement 2

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
01/01/2018					$550,000.00
01/31/2018	$550,000.00	$ 1,190.37	$ 2,750.00	$ 3,940.37	548,809.63
02/28/2018	548,809.63	1,196.32	2,744.05	3,940.37	547,613.31

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
01/31/2018	=	$550,000.00	×	0.06	×	1/12	=	$2,750.00
02/28/2018	=	$548,809.63	×	0.06	×	1/12	=	$2,744.05

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 31	Mortgages Payable	1,190.37	
	Interest Expense	2,750.00	
	Cash		3,940.37

Requirement 4

Date	Accounts and Explanation	Debit	Credit
2018			
Feb. 28	Mortgages Payable	1,196.32	
	Interest Expense	2,744.05	
	Cash		3,940.37

E12-20

		Plan A: Issue $4,000,000 of 9% Bond Payable		Plan B: Issue $4,000,000 of Common Stock
Net income before new project		$ 350,000		$ 350,000
Expected income on the new project before interest and income tax expenses	$ 700,000		$ 700,000	
Less: Interest expense ($4,000,000 × 0.09)	360,000		0	
Project income before income tax	340,000		700,000	
Less: Income tax expense (30%)	102,000		210,000	
Project net income		238,000		490,000
Net income with new project		$ 588,000		$ 840,000
Earnings per share with new project:				
Plan A ($588,000 / 300,000 shares)		$ 1.96		
Plan B ($840,000 / 800,000 shares)				$ 1.05

Plan A will have higher earnings per share.

E12-21
Requirement 1

a. Face Value
b. Discount
c. Discount

Requirement 2

Face value	×	Issue price	Market price or Cash received
$490,000	×	0.89	$436,100

Requirement 3

Cash paid each year	Interest expense – 1st year
$490,000 × 0.09 = $44,100	[($490,000 − $436,100) / 5] + $44,100 = $54,880

E12-22
Requirement 1

Date	Accounts and Explanation	Debit	Credit
June 30	Cash	120,000	
	Bonds Payable		120,000
	Issued bonds at face value.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Interest Expense	6,600	
	Cash ($120,000 × 0.11 × 6/12)		6,600
	Paid semiannual interest.		

E12-23
Requirement 1

Date	Accounts and Explanation	Debit	Credit
June 30	Cash ($130,000 × 0.86)	111,800	
	Discount on Bonds Payable ($130,000 – $111,800)	18,200	
	Bonds Payable		130,000
	Issued bonds at a discount.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Interest Expense ($5,200 + $455)	5,655	
	Discount on Bonds Payable ($18,200 × 1/40)		455
	Cash ($130,000 × 0.08 × 6/12)		5,200
	Paid semiannual interest and amortized discount.		

E12-24
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	70,000	
	Bonds Payable		70,000
July 1	Interest Expense	3,150	
	Cash ($70,000 × 0.09 × 6/12)		3,150

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($70,000 × 0.92)	64,400	
	Discount on Bonds Payable ($70,000 − $64,400)	5,600	
	Bonds Payable		70,000
July 1	Interest Expense ($280 + $3,150)	3,430	
	Discount on Bonds Payable ($5,600 × 1/20)		280
	Cash ($70,000 × 0.09 × 6/12)		3,150

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($70,000 × 1.03)	72,100	
	Premium on Bonds Payable ($72,100 − $70,000)		2,100
	Bonds Payable		70,000
July 1	Interest Expense ($3,150 − $105)	3,045	
	Premium on Bonds Payable ($2,100 × 1/20)	105	
	Cash ($70,000 × 0.09 × 6/12)		3,150

Requirement 4

The bond issue at a discount results in a higher interest expense for the company. The discount needs to be amortized over the life of the bond, resulting in interest expense greater than the amount of interest actually paid.

E12-25
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($240,000 × 1.04)	249,600	
	Premium on Bonds Payable ($249,600 − $240,000)		9,600
	Bonds Payable		240,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense ($9,600 − $240)	9,360	
	Premium on Bonds Payable ($9,600 × 1/40)	240	
	Cash ($240,000 × 0.08 × 6/12)		9,600

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Interest Expense ($9,600 − $240)	9,360	
	Premium on Bonds Payable ($9,600 × 1/40)	240	
	Cash ($240,000 × 0.08 × 6/12)		9,600

Requirement 4

Date	Accounts and Explanation	Debit	Credit
2037			
Dec. 31	Bonds Payable	240,000	
	Cash		240,000

E12-26
Requirement 1

Face value $600,000 – Carrying Value $564,000 ($600,000 × 0.94) = Discount $36,000
Discount $36,000 / 15 years = $2,400 amortized per year

	Discount Amortized	**Carrying Amount**
07/31/2018		$ 564,000
07/31/2019	$ 2,400	566,400
07/31/2020	2,400	568,800
07/31/2021	2,400	571,200

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2021			
July 31	Bonds Payable	600,000	
	Loss on Retirement of Bonds Payable	34,800	
	Discount on Bonds Payable ($36,000 – (3 × $2,400))		28,800
	Cash ($600,000 × 1.01)		606,000

Face value of the bonds being retired	$ 600,000
Less: Discount	28,800
Carrying amount of bonds payable	571,200
Market price paid to retire the bonds ($600,000 × 1.01)	606,000
Loss on retirement of bonds payable	$ (34,800)

E12-27
Requirement 1

	December 31		
	2018	2019	2020
Current Liabilities:			
Bonds Payable	$ 130,000	$ 130,000	$ 130,000
Interest Payable	58,500	39,000	19,500
Long-term Liabilities:			
Bonds Payable	260,000	130,000	0

Interest calculations:

	Balance		Rate		Time		Interest Owed
2018	$390,000	×	0.15	×	12/12	=	$58,500
2019	$260,000	×	0.15	×	12/12	=	$39,000
2020	$130,000	×	0.15	×	12/12	=	$19,500

E12-28

MEDISTAT PRECISION INSTRUMENTS Balance Sheet (Partial) December 31, 2018		
Liabilities		
Current Liabilities		
Accounts Payable	$ 52,000	
Current Portion of Bonds Payable	35,000	
Salaries Payable	12,000	
Income Tax Payable	10,000	
Interest Payable	4,000	
Total Current Liabilities		$ 113,000
Long-term Liabilities		
Bonds Payable	265,000	
Total Long-term Liabilities		265,000
Total Liabilities		$ 378,000

E12-29

Assets:		Liabilities:	
Current assets	$ 58,200	Current liabilities	$ 36,210
Other assets	36,800	Long-term liabilities	139,630
Property, plant and equipment	206,440	Total Liabilities	175,840
		Stockholder's Equity	**125,600**
Total Assets	$301,440	Total Liabilities & Stockholder's Equity	$ 301,440

Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$175,840	/	$125,600
	=	1.40		

E12A-30
Requirement 1

Present value = $86,000 because the stated rate of interest equals the market rate of interest.

Requirement 2

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 8% (16% / 2), n = 20 (10 years × 2)*
	=	$86,000	×	0.215
	=	$18,490		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 8% (16% / 2), n = 20 (10 years × 2)*
	=	($86,000 × 0.14 × 6/12)	×	
	=	$6,020	×	9.818
		$59,104		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$18,490	+	$59,104
	=	$77,594		

E12A-30, cont.
Requirement 3

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	$86,000	×	0.312
	=	$26,832		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	($86,000 × 0.14 × 6/12)	×	
	=	$6,020	×	11.470
		$69,049		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$26,832	+	$69,049
	=	$95,881		

E12B-31
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Cash	83,000	
	Bonds Payable		83,000
	Issued bonds at face value.		
	Interest Expense ($83,000 × 0.10 × 6/12)	4,150	
	Cash		4,150
	Paid semiannual interest payment.		

E12B-31, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Cash	62,433	
	Discount on Bonds Payable ($83,000 − $62,433)	20,567	
	Bonds Payable		83,000
	Issued bonds at discount.		
	Interest Expense ($62,433 × 0.16 × 6/12)	4,995	
	Discount on Bonds Payable ($4,995 – $4,150)		845
	Cash ($83,000 × 0.10 × 6/12)		4,150
	Paid semiannual interest payment and amortized discount.		

Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Cash	91,727	
	Premium on Bonds Payable ($91,727 − $83,000)		8,727
	Bonds Payable		83,000
	Issued bonds at premium.		
	Interest Expense ($91,727 × 0.08 × 6/12)	3,669	
	Premium on Bonds Payable ($4,150 – $3,669)	481	
	Cash ($83,000 × 0.10 × 6/12)		4,150
	Paid semiannual interest payment and amortized premium.		

Problems (Group A)

P12-32A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Mar. 1	Cash	450,000	
	Notes Payable		450,000
Dec. 1	Cash	250,000	
	Mortgages Payable		250,000
Dec. 31	Interest Expense ($250,000 × 0.12 × 1/12)	2,500	
	Interest Payable		2,500
Dec. 31	Interest Expense ($450,000 × 0.05 × 10/12)	18,750	
	Interest Payable		18,750
2019			
Jan. 1	Interest Payable	2,500	
	Mortgages Payable ($8,000 − $2,500)	5,500	
	Cash		8,000
Feb. 1	Interest Expense	2,445	
	Mortgages Payable ($8,000 − $2,445)	5,555	
	Cash		8,000
Mar. 1	Interest Expense	2,389	
	Mortgages Payable ($8,000 − $2,389)	5,611	
	Cash		8,000
Mar. 1	Interest Payable	18,750	
	Interest Expense($450,000 × 0.05 × 2/12)	3,750	
	Notes Payable	30,000	
	Cash		52,500

P12-32A, cont.
Requirement 1, cont.

Saputo Bank Interest Calculations

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/01/2018					$ 250,000
01/01/2019	$ 250,000	$ 5,500	$ 2,500	$ 8,000	244,500
02/01/2019	244,500	5,555	2,445	8,000	238,945
03/01/2019	238,945	5,611	2,389	8,000	233,334

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
1/01/19	=	$250,000	×	0.12	×	1/12	=	$ 2,500
02/01/2019	=	244,500	×	0.12	×	1/12	=	2,445
03/01/2019	=	238,945	×	0.12	×	1/12	=	2,389

Requirement 2

JOHNSON PHARMACIES Balance Sheet (Partial) March 1, 2019		
Liabilities		
Current Liabilities		
Current Portion of Notes Payable	$ 30,000	
Current Portion of Mortgages Payable (See table)	71,868	
Total Current Liabilities		$ 101,868
Long-term Liabilities		
Notes Payable	390,000	
Mortgages Payable ($233,334 − $71,868)	161,466	
Total Long-term Liabilities		551,466
Total Liabilities		$ 653,334

P12-32A, cont.
Requirement 2, cont.

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/01/2018					$ 250,000
01/01/2019	$ 250,000	$ 5,500	$ 2,500	$ 8,000	244,500
02/01/2019	244,500	5,555	2,445	8,000	238,945
03/01/2019	238,945	5,611	2,389	8,000	233,334
04/01/2019	233,334	5,667	2,333	8,000	227,667
05/01/2019	227,667	5,723	2,277	8,000	221,944
06/01/2019	221,944	5,781	2,219	8,000	216,163
07/01/2019	216,163	5,838	2,162	8,000	210,325
08/01/2019	210,325	5,897	2,103	8,000	204,428
09/01/2019	204,428	5,956	2,044	8,000	198,472
10/01/2019	198,472	6,015	1,985	8,000	192,457
11/01/2019	192,457	6,075	1,925	8,000	186,382
12/01/2019	186,382	6,136	1,864	8,000	180,246
01/01/2020	180,246	6,198	1,802	8,000	174,048
02/01/2020	174,048	6,260	1,740	8,000	167,788
03/01/2020	167,788	6,322	1,678	8,000	161,466

Principal portion of mortgage over next 12 months (4/1/2019 through 3/1/2020)
$71,868 = $5,667 + $5,723 + $5,781 +$5,838 + $5,897 + $5,956 + $6,015 + $6,075 + $6,136 + $6,198 + $6,260 + $ 6,322

P12-33A
Requirement 1

a. $600,000
b. $552,000
c. $600,000 × 0.06 × 12/12 = $36,000; $36,000 × 1/2 = $18,000 semiannual cash payment
d. $600,000 – ($600,000 × 0.90) = $60,000 Discount / 10 years = $6,000 per year plus $36,000 = $42,000 interest expense per year

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2020			
Jun. 30	Interest Expense ($18,000 + $3,000)	21,000	
	Discount on Bonds Payable ($60,000 × 1/20)		3,000
	Cash ($600,000 × 0.06 × 6/12)		18,000
	Paid semiannual interest payment and amortized discount.		

P12-34A
Requirement 1

The 8% bonds will be issued at a premium if the market interest rate is 7%. They are attractive in this market, so investors will pay more than the face value to acquire them.

Requirement 2

The 8% bonds will be issued at a discount if the market interest rate is 9%. They are unattractive in this market, so investors will play less than face value to acquire them.

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($600,000 × 0.92)	552,000	
	Discount on Bonds Payable ($600,000 − $552,000)	48,000	
	Bonds Payable		600,000
	Issued bonds at discount.		
Jun. 30	Interest Expense ($24,000 + $1,200)	25,200	
	Discount on Bonds Payable ($48,000 × 1/40)		1,200
	Cash ($600,000 × 0.08 × 6/12)		24,000
	Paid semiannual interest payment and amortized discount.		
Dec. 31	Interest Expense ($24,000 + $1,200)	25,200	
	Discount on Bonds Payable ($48,000 × 1/40)		1,200
	Cash ($600,000 × 0.08 × 6/12)		24,000
	Paid semiannual interest payment and amortized discount.		
2037			
Dec. 31	Bonds Payable	600,000	
	Cash		600,000
	Retired bonds.		

P12-35A

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($1,000,000 × 1.09)	1,090,000	
	Premium on Bonds Payable ($1,090,000 − $1,000,000)		90,000
	Bonds Payable		1,000,000
	Issued bonds at premium.		
Jun. 30	Interest Expense ($40,000 − $2,250)	37,750	
	Premium on Bonds Payable ($90,000 × 1/40)	2,250	
	Cash ($1,000,000 × 0.08 × 6/12)		40,000
	Paid semiannual interest payment and amortized premium.		
Dec. 31	Interest Expense ($40,000 − $2,250)	37,750	
	Premium on Bonds Payable ($90,000 × 1/40)	2,250	
	Cash ($1,000,000 × 0.08 × 6/12)		40,000
	Paid semiannual interest payment and amortized premium.		
2037			
Dec. 31	Bonds Payable	1,000 000	
	Cash		1,000,000
	Retired bonds.		

P12-36A
Requirement 1

PACK LEADER WIRELESS			
Balance Sheet (Partial)			
December 31, 2018			
Liabilities			
Current Liabilities			
Accounts Payable		$ 77,000	
Interest Payable		18,000	
Salaries Payable		7,500	
Unearned Revenue		2,700	
Current Portion of Bonds Payable		25,000	
Total Current Liabilities			$ 130,200
Long-term Liabilities			
Mortgages Payable		73,000	
Bonds Payable	$ 63,000		
Plus: Premium on Bonds Payable	10,000	73,000	
Total Long-term Liabilities			146,000
Total Liabilities			$ 276,200

Requirement 2

Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$276,200	/	$140,000
	=	1.97		

P12AB-37A
Requirement 1

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 3% (6% / 2), n = 12 (6 years × 2)*
	=	$600,000	×	0.701
	=	$420,600		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 3% (6% / 2), n = 12 (6 years × 2)*
	=	($600,000 × 0.07 × 6/12)	×	
	=	$21,000	×	9.954
	=	$209,034		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$420,600	+	$209,034
	=	$629,634		

Requirement 2

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				$ 629,634
06/30/2018	$ 21,000	$ 18,889	$ 2,111	627,523
12/31/2018	21,000	18,826	2,174	625,349

Cash Paid	=	Face value	×	Stated interest rate	×	Time		
	=	$600,000	×	0.07	×	6/12	=	$21,000

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2018	=	$629,634	×	0.06	×	6/12	=	$ 18,889
12/31/2018		$627,523	×	0.06	×	6/12	=	$ 18,826

P12AB-37A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	629,634	
	Premium on Bonds Payable ($629,634 − $600,000)		29,634
	Bonds Payable		600,000
Jun. 30	Interest Expense	18,889	
	Premium on Bonds Payable	2,111	
	Cash		21,000
Dec. 31	Interest Expense	18,826	
	Premium on Bonds Payable	2,174	
	Cash		21,000

P12AB-38A
Requirement 1

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	$300,000	×	0.312
	=	$93,600		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 6% (12% / 2), n = 20 (10 years × 2)*
	=	($300,000 × 0.07 × 6/12)	×	
	=	$10,500	×	11.470
	=	$120,435		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$93,600	+	$120,435
	=	$214,035		

P12AB-38A, cont.
Requirement 2

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				$ 214,035
06/30/2018	$ 10,500	$ 12,842	$ 2,342	216,377
12/31/2018	10,500	12,983	2,483	218,860

Cash Paid	=	Face value	×	Stated interest rate	×	Time		
	=	$300,000	×	0.07	×	6/12	=	$10,500

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2018	=	$214,035	×	0.12	×	6/12	=	$ 12,842
12/31/2018	=	$216,377	×	0.12	×	6/12	=	$ 12,983

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	214,035	
	Discount on Bonds Payable ($300,000 − $214,035)	85,965	
	Bonds Payable		300,000
Jun. 30	Interest Expense	12,842	
	Discount on Bonds Payable		2,342
	Cash		10,500
Dec. 31	Interest Expense	12,983	
	Discount on Bonds Payable		2,483
	Cash		10,500

Problems (Group B)

P12-39B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Mar. 1	Cash	390,000	
	Notes Payable		390,000
Dec. 1	Cash	350,000	
	Mortgages Payable		350,000
Dec. 31	Interest Expense ($350,000 × 0.09 × 1/12)	2,625	
	Interest Payable		2,625
Dec. 31	Interest Expense ($390,000 × 0.13 × 10/12)	42,250	
	Interest Payable		42,250
2019			
Jan. 1	Interest Payable	2,625	
	Mortgages Payable ($7,000 − $2,625)	4,375	
	Cash		7,000
Feb. 1	Interest Expense	2,592	
	Mortgages Payable ($7,000 − $2,592)	4,408	
	Cash		7,000
Mar. 1	Interest Expense	2,559	
	Mortgages Payable ($7,000 − $2,559)	4,441	
	Cash		7,000
Mar. 1	Interest Payable	42,250	
	Interest Expense ($390,000 × 0.13 × 2/12)	8,450	
	Notes Payable	65,000	
	Cash		115,700

P12-39B, cont.
Requirement 1, cont.

Saylor Bank Interest Calculations

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/01/2018					$ 350,000
01/01/2019	$ 350,000	$ 4,375	$ 2,625	$ 7,000	345,625
02/01/2019	345,625	4,408	2,592	7,000	341,217
03/01/2019	341,217	4,441	2,559	7,000	336,776

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
01/01/2019	=	$ 350,000	×	0.09	×	1/12	=	$ 2,625
02/01/2019	=	345,625	×	0.09	×	1/12	=	$ 2,592
03/01/2019	=	341,217	×	0.09	×	1/12	=	$ 2,559

Requirement 2

GREAT VALUE PHARMACIES Balance Sheet (Partial) March 1, 2019		
Liabilities		
Current Liabilities		
Current Portion of Notes Payable	$ 65,000	
Current Portion of Mortgages Payable (See table)	55,961	
Total Current Liabilities		$ 120,961
Long-term Liabilities		
Notes Payable	260,000	
Mortgages Payable ($336,776 − $55,961)	280,815	
Total Long-term Liabilities		540,815
Total Liabilities		$ 661,776

P12-39B, cont.
Requirement 2, cont.

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/01/2018					$ 350,000
01/01/2019	$ 350,000	$ 4,375	$ 2,625	$ 7,000	345,625
02/01/2019	345,625	4,408	2,592	7,000	341,217
03/01/2019	341,217	4,441	2,559	7,000	336,776
04/01/2019	336,776	4,474	2,526	7,000	332,302
05/01/2019	332,302	4,508	2,492	7,000	327,794
06/01/2019	327,794	4,542	2,458	7,000	323,252
07/01/2019	323,252	4,576	2,424	7,000	318,676
08/01/2019	318,676	4,610	2,390	7,000	314,066
09/01/2019	314,066	4,645	2,355	7,000	309,421
10/01/2019	309,421	4,679	2,321	7,000	304,742
11/01/2019	304,742	4,714	2,286	7,000	300,028
12/01/2019	300,028	4,750	2,250	7,000	295,278
01/01/2020	295,278	4,785	2,215	7,000	290,493
02/01/2020	290,473	4,821	2,179	7,000	285,672
03/01/2020	285,672	4,857	2,143	7,000	280,815

Principal portion of mortgage over next 12 months (4/1/2019 through 3/1/2020)
$55,961 = 4,474 + $4,508 + $4,542 + $4,576 + $4,610 + $4,645 + $4,679 + $4,714 + $4,750 + $4,785 + $4,821 + $4,857

P12-40B
Requirement 1

a. $300,000
b. $264,000
c. $300,000 × 0.08 × 12/12 = $24,000;
Semiannual is $24,000 × 1/2 = $12,000
d. $300,000 – ($300,000 × 0.85) = $45,000 Discount / 10 years =
$4,500 per year plus $24,000 = $28,500 interest expense per year

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2020			
Jun. 30	Interest Expense ($2,250 + $12,000)	14,250	
	Discount on Bonds Payable ($45,000 × 1/20)		2,250
	Cash ($300,000 × 0.08 × 6/12)		12,000
	Paid semiannual interest payment and amortized discount.		

P12-41B
Requirement 1

The 7% bonds will be issued at a premium if the market interest rate is 5%. They are attractive in this market, so investors will pay more than the face value to acquire them.

Requirement 2

The 7% bonds will be issued at a discount if the market interest rate is 8%. They are unattractive in this market, so investors will play less than face value to acquire them.

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($200,000 × 0.93)	186,000	
	Discount on Bonds Payable ($200,000 − $186,000)	14,000	
	Bonds Payable		200,000
	Issued bonds at discount.		
Jun. 30	Interest Expense ($7,000 + $350)	7,350	
	Discount on Bonds Payable ($14,000 × 1/40)		350
	Cash ($200,000 × 0.07 × 6/12)		7,000
	Paid semiannual interest payment and amortized discount.		
Dec. 31	Interest Expense ($7,000 + $350)	7,350	
	Discount on Bonds Payable ($14,000 × 1/40)		350
	Cash ($200,000 × 0.07 × 6/12)		7,000
	Paid semiannual interest payment and amortized discount.		
2037			
Dec. 31	Bonds Payable	200,000	
	Cash		200,000
	Retired bonds.		

P12-42B

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash ($400,000 × 1.04)	416,000	
	Premium on Bonds Payable ($416,000 − $400,000)		16,000
	Bonds Payable		400,000
	Issued bonds at premium.		
Jun. 30	Interest Expense ($16,000 − $400)	15,600	
	Premium on Bonds Payable ($16,000 × 1/40)	400	
	Cash ($400,000 × 0.08 × 6/12)		16,000
	Paid semiannual interest payment and amortized premium.		
Dec. 31	Interest Expense ($16,000 − $400)	15,600	
	Premium on Bonds Payable ($16,000 × 1/40)	400	
	Cash ($400,000 × 0.08 × 6/12)		16,000
	Paid semiannual interest payment and amortized premium.		
2037			
Dec. 31	Bonds Payable	400,000	
	Cash		400,000
	Retired bonds.		

P12-43B
Requirement 1

COMPASS WIRELESS Balance Sheet (Partial) December 31, 2018			
Liabilities			
Current Liabilities			
Accounts Payable		$ 74,000	
Interest Payable		21,000	
Salaries Payable		7,500	
Unearned Revenue		2,700	
Current Portion of Bonds Payable		25,000	
Total Current Liabilities			$ 130,200
Long-term Liabilities			
Mortgages Payable		80,000	
Bonds Payable	$ 63,000		
Plus: Premium on Bonds Payable	13,000	76,000	
Total Long-term Liabilities			156,000
Total Liabilities			$ 286,200

Requirement 2

Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$286,200	/	$145,000
	=	1.97		

P12AB-44B
Requirement 1

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 5% (10% / 2), n = 10 (5 years × 2)*
	=	$300,000	×	0.614
	=	$184,200		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 5% (10% / 2), n = 10 (5 years × 2)*
	=	($300,000 × 0.11 × 6/12)	×	
	=	$16,500	×	7.722
	=	$127,413		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$184,200	+	$127,413
	=	$311,613		

Requirement 2

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				$ 311,613
06/30/2018	$ 16,500	$ 15,581	$ 919	310,694
12/31/2018	16,500	15,535	965	309,729

Cash Paid	=	Face value	×	Stated interest rate	×	Time		
	=	$300,000	×	0.11	×	6/12	=	$16,500

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2018	=	$311,613	×	0.10	×	6/12	=	$ 15,581
12/31/2018	=	$310,694	×	0.10	×	6/12	=	$ 15,535

P12AB-44B, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	311,613	
	Premium on Bonds Payable ($311,613 − $300,000)		11,613
	Bonds Payable		300,000
Jun. 30	Interest Expense	15,581	
	Premium on Bonds Payable	919	
	Cash		16,500
Dec. 31	Interest Expense	15,535	
	Premium on Bonds Payable	965	
	Cash		16,500

P12AB-45B
Requirement 1

Present value of principal:				
Present value	=	Future value	×	PV factor for *i = 5% (10% / 2),* *n = 20 (10 years × 2)*
	=	$500,000	×	0.377
	=	$188,500		
Present value of stated interest:				
Present value	=	Amount of each cash flow	×	Annuity PV factor for *i = 5% (10% / 2),* *n = 20 (10 years × 2)*
	=	($500,000 × 0.09 × 6/12)	×	
	=	$22,500	×	12.462
	=	$280,395		
Present value of bonds payable:				
Present value	=	PV of principal	+	PV of stated interest
	=	$188,500	+	$280,395
	=	$468,895		

P12AB-45B, cont.
Requirement 2

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				$ 468,895
06/30/2018	$ 22,500	$ 23,445	$ 945	469,840
12/31/2018	22,500	23,492	992	470,832

Cash Paid	=	Face value	×	Stated interest rate	×	Time		
	=	$500,000	×	0.09	×	6/12	=	$22,500

Interest Expense	=	Carrying Amount	×	Market interest rate	×	Time		
06/30/2018	=	$ 468,895	×	0.10	×	6/12	=	$ 23,445
12/31/2018	=	$ 469,840	×	0.10	×	6/12	=	$ 23,492

Requirement 3

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	468,895	
	Discount on Bonds Payable ($500,000 − $468,895)	31,105	
	Bonds Payable		500,000
Jun. 30	Interest Expense	23,445	
	Discount on Bonds Payable		945
	Cash		22,500
Dec. 31	Interest Expense	23,492	
	Discount on Bonds Payable		992
	Cash		22,500

Using Excel

P12-46

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P12-47

Requirement 1

Canyon Canoe Company's bond will be issued at a discount because the cash proceeds are less than the face value of the bonds.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2020			
Jan. 2	Cash	208,476	
	Discount on Bonds Payable ($210,000 − $208,476)	1,524	
	Bonds Payable		210,000
2	Cash	450,000	
	Mortgages Payable		450,000
Jun. 30	Interest Expense ($127 + $7,875)	8,002	
	Discount on Bonds Payable ($1,524 × 1/ 12)		127
	Cash ($210,000 × 0.075 × 6/12)		7,875
Dec. 31	Bond Interest Expense ($127 + $7,875)	8,002	
	Discount on Bonds Payable ($1,524 × 1/ 12)		127
	Cash ($210,000 × 0.075 × 6/12)		7,875
31	Mortgage Payable	45,000	
	Interest Expense ($450,000 × 0.08 × 12/12)	36,000	
	Cash		81,000

Requirement 3

Date	Interest Expense
Jun. 30	$ 8,002
Dec. 31	8,002
Dec. 31	36,000
Totals	$ 52,004

Critical Thinking

Tying It All Together Case 12-1

Requirement 1
The company has several different types of borrowings including commercial paper, U.S. medium-term notes, foreign currency denominated debt, capital cities/ABC debt, other, and international theme parks borrowings.

Requirement 2
Commercial paper is an unsecured, short-term debt instrument issued by a corporation, typically to meet short-term liabilities. These notes typically mature in less than 270 days. A medium-term note (MTN) is a note that usually matures in 5 to 10 years, although the maturity of the note could be longer. These notes are typically offered by a company to investors through a dealer.

Requirement 3
The Walt Disney Company reports that its U.S. medium-term notes have maturities ranging from 1 to 78 years.

Decision Case 12-1
Requirement 1

Brooks will actually borrow $480,000 ($500,000 × 0.96). Brooks must pay back the full $500,000 at maturity. Brooks will account for the $20,000 difference (discount) between the $480,000 borrowed and the $500,000 paid back by amortizing the discount as interest expense over the 10 years that the bonds are outstanding.

Requirement 2

Companies prefer to borrow for longer periods when interest rates are low in order to lock in the low cost of interest for a lengthy period. When interest rates are high, companies prefer to borrow short-term in the hope that interest rates will decrease in the near term. This strategy keeps interest expenses as low as possible.

Ethical Issues 12-1

The ethical issue here is whether the full mortgage should be shown as a current liability. While Raffie's Kids may want to pay off the full mortgage in the next year they are not required to. The bookkeeper is trying to have the financial statements reflect what they see as current liabilities. The bookkeeper should show the mortgage split between current ($20,000) and long-term liabilities ($267,000) based on the mortgage agreement. It could be confusing for a user of the financial statements to see it all as current. They may be concerned about the organization's cash needs in the next year. The incorrect presentation might also be seen as a way to increase donations.

Fraud Case 12-1
Requirement 1

When a company goes bankrupt, there is a court settlement in which the remaining assets of the company are distributed to investors and creditors, according to a specified priority. Secured creditors are paid first, then unsecured creditors, and finally stockholders. Equity investors often lose their entire investment. Bondholders may receive a settlement of a portion of the amount owed, or in some cases, nothing at all. Once all settlements are legally concluded, any remaining bonds have no value, except in some cases, as collectors' items.

Requirement 2

Stocks and bonds should normally be purchased only through a licensed securities dealer. Investors should always receive a brokerage statement showing their name as owner. The company should be listed on the bond market.

Requirement 3

Bonds are given a grade to indicate their credit quality. Private independent rating services such as Standard & Poor's, Moody's and Fitch provide these evaluations of a bond issuer's financial strength, or its ability to pay a bond's principal and interest in a timely fashion. Bond ratings are expressed as letters ranging from AAA, which is the highest grade, to C (junk), which is the lowest grade. Different rating services use the same letter grades, but they use various combinations of upper- and lower-case letters to differentiate themselves.

Financial Statement Case 12-1
Requirement 1

Target's long-term debt at January 30, 2016 included:	
Long-term debt and other borrowings	$ 11,945 million
Deferred income tax	823 million
Noncurrent liabilities of discontinued operations	18 million
Other noncurrent liabilities	1,897 million
Total noncurrent liabilities	$ 14,683 million

Requirement 2
(In Millions)

Target: Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$27,305	/	$12,957
	=	2.11		

Kohl's: Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$8,115	/	$5,491
	=	1.48		

Both Target and Kohl's have debt to equity ratios greater than one, indicating that they both use financial leverage to finance their assets with more debt than equity. However, Target's ratio is significantly higher than Kohl's' ratio, which also indicates Target is at higher risk of default than Kohl's.

Stockholders' Equity 13

How Do We Raise More Cash?

Lacey Snyder and Alison Mason, stockholders of Sharemymovie.com, were reviewing the latest financial statements of their business. Sharemymovie.com, a video-sharing Web site in which users can upload, share, and view videos, started five years ago with a cash contribution from each owner and a small bank loan. In the past five years, the site has grown rapidly with more than 1 million video views each day. Lacey and Alison are excited about the success of the business, but the business has recently been experiencing growing pains.

With the increase in the number of users visiting the site and uploading new videos daily, Lacey and Alison know they need to invest in a new Web site design and purchase updated software. But these expansions will take cash, and they are reluctant to borrow more money from the bank. Lacey and Alison considered asking friends and family to invest in the business. They realized that in order to gain enough cash to meet the growing needs of the business, they would need a large influx of money. After talking to their accountant, they are considering expanding their corporation and taking their business public. In other words, the business will offer ownership (through stock) for anyone who is willing to invest.

By offering the opportunity to own a share in the business, Sharemymovie.com can quickly raise the necessary cash to meet its expansion needs. In addition, the corporate form of business offers liability protection for the stockholders. But there are also some disadvantages to the corporate form, such as double taxation and increased government regulation. As Lacey and Alison move forward with their decision, they need to understand the pros and cons of corporations and carefully evaluate the impact of this decision.

How Much Is the Business Worth?

On February 1, 2012, **Facebook, Inc.**, the popular social media Web site, announced that it planned to issue shares of stock on the stock market under the ticker symbol FB. On May 18, Mark Zuckerberg, the mastermind behind Facebook, rang the opening bell of the stock exchange and shares of Facebook stock began selling at $42.05 per share. On that day, more than 500 million shares were sold and exchanged with an estimated market capitalization of more than $104 billion, one of the largest initial public offerings (IPO) to date. It's interesting to note that in less than a month after its IPO, Facebook stock lost more than a quarter of its value and continues to fluctuate.

Why did Facebook decide to issue stock? What are the advantages and disadvantages of a corporation? How is stock reported on the financial statements? What does the drop in market price of the stock mean to Facebook? In this chapter, we explore the answers to these questions and many more. You learn why businesses decide to organize as a corporation and how to account for transactions unique to a corporation.

Chapter 13 Learning Objectives

1. Identify the characteristics of a corporation
2. Journalize the issuance of stock
3. Account for the purchase and sale of treasury stock
4. Account for cash dividends, stock dividends, and stock splits
5. Prepare a corporate income statement including earnings per share
6. Explain how equity is reported for a corporation
7. Use earnings per share, rate of return on common stockholders' equity, and the price/earnings ratio to evaluate business performance

WHAT IS A CORPORATION?

Learning Objective 1
Identify the characteristics of a corporation

Corporation
A business organized under state law that is a separate legal entity.

As introduced in earlier chapters, a **corporation** is a business organized under state law that is a separate legal entity. Corporations dominate business activity in the United States. Most well-known companies are corporations and tend to be large multinational businesses.

Characteristics of Corporations

A corporation has many unique characteristics:

- **Separate legal entity**—A corporation is a separate legal entity. It is organized independently of its owners.
- **Number of owners**—Corporations have one or more owners (called *stockholders*). A *public* corporation is a corporation whose stock can be purchased on an organized stock exchange, such as the New York Stock Exchange (NYSE) or the NASDAQ Stock Market. Public corporations often have thousands of owners. Some corporations are *privately held*, which means that the stock cannot be purchased on a stock exchange. These corporations often have only a few stockholders.
- **No personal liability of the owner(s) for business's debts**—Stockholders are not personally liable for the debts of the corporation.
- **Lack of mutual agency**—Unlike owners of a sole proprietorship and partnership, stockholders of the corporation are not mutual agents of the business. Stockholders cannot bind the business to a contract.
- **Indefinite life**—Corporations have an indefinite life. They can exist until the business decides to terminate. Withdrawal or death of an owner does not cause termination of the business.
- **Taxation**—Corporations are separate taxable entities. The corporation pays the income tax on the business earnings and is also responsible for paying payroll taxes on employee salaries and wages. Corporations also experience double taxation. Double taxation occurs when corporations make cash payments (called *dividends*) to stockholders. These payments are taxed once as earnings of the corporation and then again when the stockholder receives the dividend. The tax is first paid by the corporation on its corporate income tax return, and then the dividends received by the stockholder are reported on the stockholder's personal income tax return.
- **Capital accumulation**—Corporations can raise more money than sole proprietorships and partnerships. This is completed through an initial public offering (IPO) and represents the initial offering of corporate shares of stock to the public.

Exhibit 13-1 summarizes the advantages and disadvantages of a corporation.

Exhibit 13-1 | **Corporations: Advantages and Disadvantages**

Advantages	Disadvantages
1. Corporations can raise more money than a proprietorship or partnership.	1. Ownership and management are often separated.
2. A corporation has a continuous life.	2. The earnings of a corporation may be subject to double taxation.
3. The transfer of corporate ownership is easy.	3. Government regulation is expensive.
4. There is no mutual agency among the stockholders and the corporation.	4. Start-up costs are higher than other business forms.
5. Stockholders have limited liability.	

Stockholders' Equity Basics

A corporation is created by filing a certificate of formation with a state. The state authorizes the business to be organized as a corporation and grants the entity a charter or articles of incorporation. The corporation then prepares a set of bylaws, which provide the rules and procedures that the corporation will follow.

The corporate charter of a corporation identifies the maximum number of shares of stock the corporation may issue, called **authorized stock**. The charter provides a state's permission for the corporation to operate. Authorized stock can be issued or unissued. **Issued stock** has been issued by the corporation but may or may not be held by stockholders. A corporation issues **stock certificates** to the stockholders when they buy the stock. The stock certificate represents the individual's ownership of the corporation's capital, so it is called **capital stock**. The basic unit of stock is a share. A corporation may issue a physical stock certificate for any number of shares. Today, many corporations issue the stocks electronically rather than printing a paper certificate. Exhibit 13-2 shows a stock certificate for 288 shares of Smart Touch Learning common stock owned by Courtney Edwards.

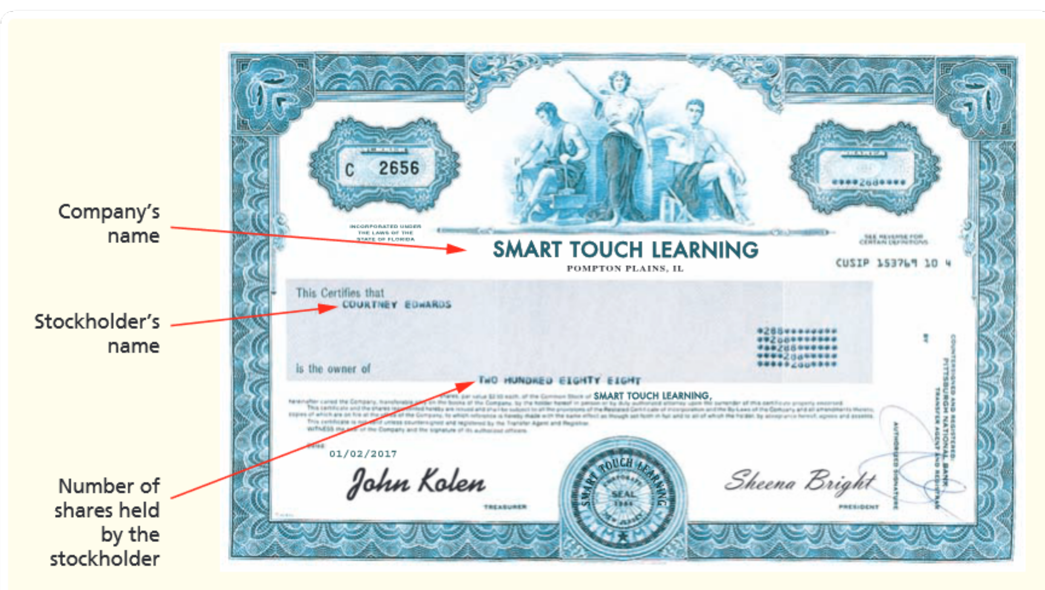
Authorized Stock
The maximum number of shares of stock that the corporate charter allows the corporation to issue.

Issued Stock
Stock that has been issued but may or may not be held by stockholders.

Stock Certificate
Paper evidence of ownership in a corporation.

Capital Stock
Represents the individual's ownership of the corporation's capital.

Exhibit 13-2 | **Stock Certificate**



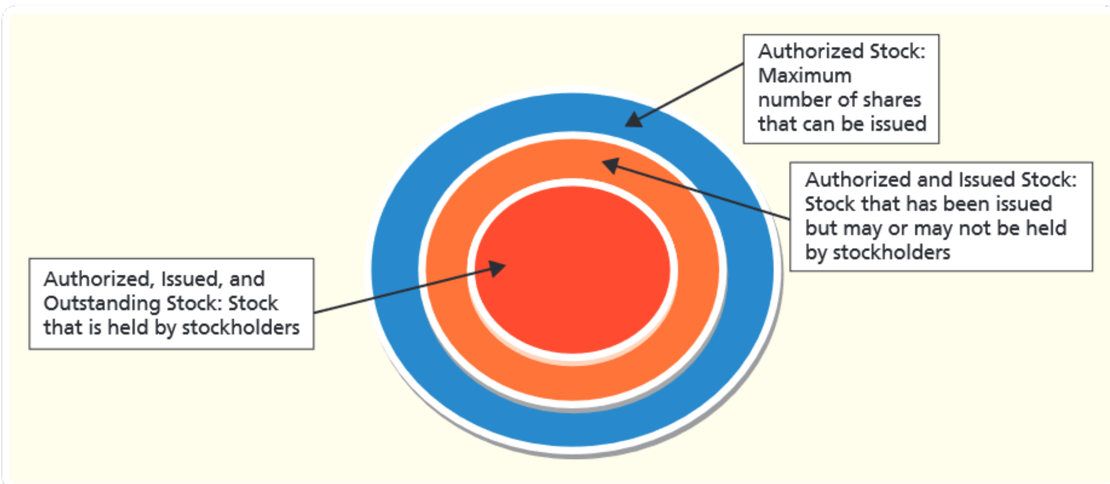
The stock certificate shows the following:

- Company name
- Stockholder name
- Number of shares owned by the stockholder

Outstanding Stock
Issued stock in the hands of stockholders.

Stock that is held by the stockholders is said to be **outstanding stock**. The outstanding stock of a corporation represents 100% of its ownership. The numbers of shares of authorized stock, issued stock, and outstanding stock are most likely going to be different amounts. Exhibit 13-3 explains the differences between these categories of stock.

Exhibit 13-3 | Categories of Stock



Stockholders' Rights

A stockholder has four basic rights, unless a right is withheld by contract:

1. **Vote.** Stockholders participate in management indirectly by voting on corporate matters at stockholders' meetings (or sometimes through the mail or electronic voting). This is the only way in which a stockholder can help to manage the corporation. Normally, each share of basic ownership in the corporation carries one vote.

Dividend
A distribution of a corporation's earnings to stockholders.

2. **Dividends.** Stockholders receive a proportionate part of any **dividend** that is declared and paid. A dividend is a distribution of a corporation's earnings to stockholders. Each share of stock receives an equal dividend so, for example, a shareholder who owns 1% of the total shares in the company receives 1% of any total dividend.
3. **Liquidation.** Stockholders receive their proportionate share of any assets remaining after the corporation pays its debts and liquidates (goes out of business).

Preemptive Right
Stockholder's right to maintain his or her proportionate ownership in the corporation.

4. **Preemptive right.** Stockholders have a **preemptive right** to maintain their proportionate ownership in the corporation. For example, suppose a stockholder owns 5% of a corporation's stock. If the corporation issues 100,000 new shares of stock, it must offer the stockholder the opportunity to buy 5% (5,000) of the new shares. This right, however, is usually withheld by contract for most corporations.

Capital Stock

Common Stock
Represents the basic ownership of a corporation.

Corporations can issue different classes of stock. The stock of a corporation may be either common or preferred. Every corporation issues **common stock**, which represents the basic ownership of the corporation. Some companies issue Class A common stock, which

carries the right to vote. They may also issue Class B common stock, which may be nonvoting. There must be at least one voting class of stock. However, there is no limit as to the number or types of classes of stock that a corporation may issue. Each class of stock has a separate account in the company's ledger.

Preferred stock gives its owners certain advantages over common stock. Most notably, preferred stockholders receive a dividend preference over common stockholders. This ensures that if a corporation pays dividends, the preferred stockholders receive their dividends first. They also receive assets before common stockholders if the corporation liquidates. When dividends are declared, corporations pay a fixed dividend on preferred stock. The amount of the preferred dividend is printed on the face of the preferred stock certificate. Investors usually buy preferred stock to earn those fixed dividends. With these advantages, preferred stockholders take less investment risk than common stockholders.

Preferred Stock
Stock that gives its owners certain advantages over common stockholders, such as the right to receive dividends before the common stockholders and the right to receive assets before the common stockholders if the corporation liquidates.

Par Value
An amount assigned by a company to a share of its stock.

Owners of preferred stock also have the four basic stockholder rights, unless a right is withheld. The right to vote, for example, is usually withheld from preferred stock. Companies may issue different series of preferred stock (Series A and Series B, for example). Each series is recorded in a separate account. Preferred stock is rarer than you might think. Many corporations have the authorization to issue preferred stock, but few actually issue the preferred shares.

Is the par value of a stock the price at which the stock is bought and sold?

Stock may carry a par value or it may be no-par stock. **Par value is an amount assigned by a company to a share of its stock. Most companies set par value low to avoid issuing their stock below par. The par value of a stock has no relation to the market value, which is the price at which the stock is bought and sold.**

The par value of preferred stock may be higher per share than common stock par values. Par value is arbitrary and is assigned when the organizers file the corporate charter with the state. There is no real reason for why par values vary. It is a choice made by the organizers of the corporation.

Some states allow the issuance of no-par stock. **No-par stock** does not have par value. No-par value stock has an advantage because there is no confusion between the par value and market value of the stock. **Stated value stock** is no-par stock that has been assigned an amount similar to par value. Stated value represents the minimum amount that the corporation can issue the stock for. Usually the state the company incorporates in will determine whether a stock may be par or stated value stock. For accounting purposes, par value stock is treated the same as stated value stock except for the account names.

No-Par Stock
Stock that has no amount (par) assigned to it.

Stated Value Stock
No-par stock that has been assigned an amount similar to par value.

Stockholders' Equity

A corporation's equity is called **stockholders' equity**. State laws require corporations to report their sources of owners' capital because some of the capital must be maintained by the company. The two basic sources of stockholders' equity are as follows:

- **Paid-in capital** (also called *contributed capital*) represents amounts received from the stockholders in exchange for stock. Common stock is the main source of paid-in capital. Paid-in capital is *externally* generated capital and results from transactions with outsiders.
- **Retained earnings** is equity earned by profitable operations that is not distributed to stockholders. Retained earnings is *internally* generated equity because it results from corporate decisions to retain net income to use in future operations or for expansion.

Stockholders' Equity
A corporation's equity that includes paid-in capital and retained earnings.

Paid-In Capital
Represents amounts received from the stockholders of a corporation in exchange for stock.

Retained Earnings
Equity earned by profitable operations of a corporation that is not distributed to stockholders.

TYING IT ALL TOGETHER

Facebook, Inc. is a mobile application and Web site that enables people to connect, share, discover, and communicate with each other. On average in December 2015, Facebook had 1.04 billion daily active users. Facebook also owns Instagram, messenger, WhatsApp, and Oculus. Facebook incorporated in Delaware in July 2004 and completed an initial public offering in May 2012. The company's Class A common stock is listed on the NASDAQ under the symbol "FB." (You can find Facebook's annual report at https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/2015-Annual-Report.pdf.)

What types of stock does Facebook have?

Facebook has Class A common stock that is listed on the NASDAQ. The company also has Class B common stock that is not listed nor traded on any stock exchange.

How many stockholders were of record as of December 31, 2015?

As of December 31, 2015, there were 5,086 stockholders of record of the Class A common stock. There were 46 stockholders of record of the company's Class B common stock. As of December 31, 2015, the closing price of Facebook's Class A common stock was $104.66 per share.

Try It!

Match the key term to the definition.

1. Stock certificate	**a.** The maximum number of shares of stock that the corporate charter allows the corporation to issue.
2. Preemptive right	**b.** Stock that gives its owners certain advantages over common stockholders.
3. Authorized stock	**c.** Stockholders' right to maintain their proportionate ownership in the corporation.
4. Preferred stock	**d.** Represents amounts received from stockholders of a corporation in exchange for stock.
5. Paid-in capital	**e.** Paper evidence of ownership in a corporation.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S13-1. MyAccountingLab

HOW IS THE ISSUANCE OF STOCK ACCOUNTED FOR?

Learning Objective 2
Journalize the issuance of stock

Underwriter
A firm that handles the issuance of a company's stock to the public, usually assuming some of the risk by agreeing to buy the stock if the firm cannot sell all of the stock to its clients.

Issue Price
The amount that the corporation receives from issuing stock.

Large corporations such as Intel Corporation and Nike, Inc. need huge quantities of money. They cannot finance all their operations through borrowing, so they raise capital by issuing stock. A company can sell its stock directly to stockholders, or it can use the services of an **underwriter**, such as the brokerage firms of Merrill Lynch & Co., Inc., Morgan Stanley, and JPMorgan Chase & Co. An underwriter usually assumes some of the risk of issuing stock by agreeing to buy all the stock the firm cannot sell to its clients. Stocks of public companies are bought and sold on a stock exchange, such as the New York Stock Exchange (NYSE) or NASDAQ Stock Market.

The amount that the corporation receives from issuing stock is called the **issue price**. Usually, the issue price exceeds par value because par value is normally set quite low.

Issuing Common Stock at Par Value

In this chapter, we will continue using Smart Touch Learning; however, we will now assume that Smart Touch Learning's common stock carries a par value of $1 per share and that the charter authorizes 20,000,000 shares of common stock. The journal entry for the issue of 15,000 shares at par value would be as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash	15,000	
	Common Stock—$1 Par Value ($1 per share × 15,000 shares)		15,000
	Issued common stock at par.		

A↑	=	L	+	E↑
Cash↑				Common Stock↑

Issuing Common Stock at a Premium

As stated previously, most corporations set par value low and issue common stock for a price above par. The amount above par is called a **premium**. Assume Smart Touch Learning issues an additional 3,000 shares for $5 per share. The $4 difference between the issue price ($5) and par value ($1) is a premium.

Premium
The amount above par at which a stock is issued.

A premium on the issue of stock is not a gain, income, or profit for the corporation because the company is dealing with its own stock. This situation illustrates one of the fundamentals of accounting in that a company cannot report a profit or loss when buying or selling its own stock. So, the premium is another type of paid-in capital account known as **Paid-In Capital in Excess of Par**. It is also called *additional paid-in capital.* The Paid-In Capital in Excess of Par account is an equity account that is reported on the balance sheet.

Paid-In Capital in Excess of Par
Represents amounts received from stockholders in excess of par value.

With a par value of $1, Smart Touch Learning's entry to record the issuance of 3,000 shares of its common stock at $5 per share is as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash ($5 per share × 3,000 shares)	15,000	
	Common Stock—$1 Par Value ($1 per share × 3,000 shares)		3,000
	Paid-In Capital in Excess of Par—Common ($4 per share × 3,000 shares)		12,000
	Issued common stock at a premium.		

A↑	=	L	+	E↑
Cash↑				Common Stock↑ Paid-In Capital in Excess of Par↑

When stock is issued at a premium, common stock is always recorded at the par value. Any amount over par value is recorded to the Paid-In Capital in Excess of Par account.

Exhibit 13-4 (on the next page) shows how Smart Touch Learning would report stockholders' equity on its balance sheet after the stock issuances, assuming that the balance of Retained Earnings is $3,550.

Exhibit 13-4 | **Stockholders' Equity**

SMART TOUCH LEARNING, INC. Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 20,000,000 shares authorized, 18,000 shares issued and outstanding	$ 18,000
Paid-In Capital in Excess of Par—Common	12,000
Total Paid-In Capital	30,000
Retained Earnings	3,550
Total Stockholders' Equity	$ 33,550

Issuing No-Par Common Stock

When a company issues no-par stock, it debits the asset received and credits the stock account. For no-par stock, there can be no Paid-In Capital in Excess of Par because there is no par to be in excess of.

Assume that, instead of $1 par value, Smart Touch Learning's common stock is no-par. How would that change the recording of the issuance of 15,000 shares for $1 and 3,000 shares for $5? The stock-issuance entries would be as follows:

A↑ Cash↑ = L + E↑ Common Stock↑

A↑ Cash↑ = L + E↑ Common Stock↑

Date	Accounts and Explanation	Debit	Credit
	Cash ($1 per share × 15,000 shares)	15,000	
	Common Stock—No-Par Value		15,000
	Issued no-par common stock.		
	Cash ($5 per share × 3,000 shares)	15,000	
	Common Stock— No-Par Value		15,000
	Issued no-par common stock.		

Regardless of the stock's issue price, Cash is debited and Common Stock is credited for the cash received. So, although the total paid-in capital of $30,000 remains the same, the Common Stock account differs from $18,000 (par stock) to $30,000 (no-par stock).

Exhibit 13-5 shows how the stockholders' equity section of the balance sheet would change.

Exhibit 13-5 | **Stockholders' Equity—No-Par Stock**

SMART TOUCH LEARNING, INC. Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—No-Par Value; 20,000,000 shares authorized, 18,000 shares issued and outstanding	$ 30,000
Retained Earnings	3,550
Total Stockholders' Equity	$ 33,550

Issuing Stated Value Common Stock

Accounting for stated value common stock is almost identical to accounting for par value stock. The only difference is that stated value stock uses an account titled Paid-In Capital in Excess of *Stated* to record amounts received above the stated value.

For example, assume that instead of issuing 3,000 shares of $1 par value stock for $5 per share, Smart Touch Learning issues 3,000 shares of $1 *stated* value stock for $5 per share. Smart Touch Learning would record the following journal entry:

Date	Accounts and Explanation	Debit	Credit
	Cash ($5 per share × 3,000 shares)	15,000	
	Common Stock—$1 Stated Value ($1 per share × 3,000 shares)		3,000
	Paid-In Capital in Excess of Stated—Common ($4 per share × 3,000 shares)		12,000
	Issued common stock at a premium.		

A↑	=	L	+	E↑
Cash↑				Common Stock↑ Paid-In Capital in Excess of Stated↑

Issuing Common Stock for Assets Other Than Cash

A corporation may issue stock for assets other than cash. It records the transaction at the market value of the stock issued or the market value of the assets received, whichever is more clearly determinable. Now let's consider that Smart Touch Learning receives an additional contribution of furniture with a market value of $18,000 in exchange for 5,000 shares of its $1 par common stock. How would the entry be recorded?

Date	Accounts and Explanation	Debit	Credit
	Furniture	18,000	
	Common Stock—$1 Par Value ($1 par value × 5,000 shares)		5,000
	Paid-In Capital in Excess of Par—Common ($18,000 – $5,000)		13,000
	Issued common stock in exchange for furniture.		

A↑	=	L	+	E↑
Furniture↑				Common Stock↑ Paid-In Capital in Excess of Par↑

As you can see, the common stock is still recorded at its $1 par value and the difference between the market value of the furniture and the par value is recorded to the Paid-In Capital in Excess of Par account. The contributed asset is recorded at its current market value.

ETHICS

What should the building be valued at?

Reed Hiller, the accountant for Snyder Corporation, is trying to decide how to record the company's most recent issuance of stock. Jack Chavez, a majority stockholder, has contributed a building in exchange for common stock. Jack believes that the building should be valued at $4 million, his evaluation of the building's market value. Jack argues that by recording the asset at such a large amount, the business will look more prosperous to investors. Reed is concerned that Jack is overvaluing the asset. What should Reed do?

Solution

Issuance of stock for cash poses no ethical challenge because the value of the asset received (cash) is clearly understood. Issuing stock for assets other than cash can pose a challenge, though. A company should record an asset received at its current market value or the market value of the stock issued, whichever is more clearly determinable. One person's evaluation of a building's market value can differ from another's. Reed should encourage the company to hire an independent appraiser to determine the current market value of the building and then record the building at that value. Alternatively, the company can use the market value of the stock issued to determine the value of the building. This would be appropriate if the stock is traded on an organized exchange.

Issuing Preferred Stock

Accounting for preferred stock follows the pattern illustrated for issuing common stock. Assume that Smart Touch Learning has authorization from the state to issue 2,000 shares of preferred stock. Smart Touch Learning decides to issue 1,000 shares of its $50 par, 6% preferred stock on January 3, 2019, at $55 per share. (The 6% in the description of the preferred stock refers to the stated dividend associated with the stock and is explained later in the chapter.) The issuance entry would be as follows:

A↑	=	L	+	E↑
Cash↑				Preferred Stock↑ Paid-In Capital in Excess of Par↑

Date	Accounts and Explanation	Debit	Credit
Jan. 3	Cash ($55 per share × 1,000 shares)	55,000	
	Preferred Stock—$50 Par Value ($50 per share × 1,000 shares)		50,000
	Paid-In Capital in Excess of Par—Preferred ($5 per share × 1,000 shares)		5,000
	Issued preferred stock at a premium.		

Preferred Stock is included in the stockholders' equity section of the balance sheet and is often listed first. Any Paid-In Capital in Excess of Par—Preferred is listed next, followed by Common Stock and Paid-In Capital in Excess of Par—Common. Exhibit 13-6 shows the stockholders' equity section of Smart Touch Learning's balance sheet, assuming both stocks were par value stocks.

Exhibit 13-6 | **Stockholders' Equity**

SMART TOUCH LEARNING, INC. Balance Sheet (Partial) January 3, 2019	
Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	$ 50,000
Paid-In Capital in Excess of Par—Preferred	5,000
Common Stock—$1 Par Value; 20,000,000 shares authorized, 23,000 shares issued and outstanding	23,000
Paid-In Capital in Excess of Par—Common	25,000
Total Paid-In Capital	103,000
Retained Earnings	3,550
Total Stockholders' Equity	$ 106,550

Try It!

6. London Corporation has two classes of stock: Common, $1 par value; and Preferred, $4 par value. Journalize the issuance of 10,000 shares of common stock for $8 per share.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S13-2 through S13-5. MyAccountingLab

HOW IS TREASURY STOCK ACCOUNTED FOR?

Learning Objective 3
Account for the purchase and sale of treasury stock

A company's own stock that it has previously issued and later reacquired is called **treasury stock**. In effect, the corporation holds the stock in its treasury. A corporation, such as Smart Touch Learning, may purchase treasury stock for several reasons:

1. Management wants to increase net assets by buying low and selling high.
2. Management wants to support the company's stock price.
3. Management wants to avoid a takeover by an outside party by reducing the number of outstanding shares that have voting rights.
4. Management wants to reward valued employees with stock.

Treasury Stock
A corporation's own stock that it has previously issued and later reacquired.

Treasury Stock Basics

Here are the basics of accounting for treasury stock:

- The Treasury Stock account has a normal debit balance, which is the opposite of the other stockholders' equity accounts. Therefore, *Treasury Stock is a contra equity account.*
- Treasury stock is recorded at cost (what the company paid to reacquire the shares), without reference to par value. (We illustrate the *cost* method of accounting for treasury stock because it is used most widely. Intermediate accounting courses also cover an alternative method.)
- The Treasury Stock account is reported beneath Retained Earnings on the balance sheet as a reduction to total stockholders' equity.

Treasury stock decreases the company's stock that is outstanding—held by outsiders (the stockholders). Therefore, outstanding stock is issued stock less treasury stock. Only outstanding shares have voting rights and receive cash or stock dividends. Treasury stock does not carry a vote, and it receives no cash or stock dividends. Now we illustrate how to account for treasury stock, continuing with Smart Touch Learning.

Purchase of Treasury Stock

Review Smart Touch Learning's stockholders' equity before purchasing treasury stock as shown in Exhibit 13-6.

Assume that on March 31, Smart Touch Learning purchased 1,000 shares of previously issued common stock, paying $5 per share. To record the purchase, the company debits Treasury Stock—Common and credits Cash:

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Treasury Stock—Common ($5 per share × 1,000 shares)	5,000	
	Cash		5,000
	Purchased treasury stock.		

A↓	=	L	+	E↓
Cash↓				Treasury Stock↑

Sale of Treasury Stock

Companies buy their treasury stock and eventually sell or retire it. A company may sell treasury stock at, above, or below its cost (what the company paid for the shares).

Sale at Cost

If treasury stock is sold for cost—the same price the corporation paid for it—there is no difference between the cost per share and the sale price per share to journalize. Assume Smart Touch Learning sells 100 of the treasury shares on April 1 for $5 each. The entry follows:

A↑	=	L	+	E↑
Cash↑				Treasury Stock↓

Date	Accounts and Explanation	Debit	Credit
Apr. 1	Cash	500	
	Treasury Stock—Common ($5 per share × 100 shares)		500
	Sold treasury stock at cost.		

Treasury Stock—Common

Mar. 31	5,000		
		500	Apr. 1
Bal.	4,500		

Sale Above Cost

If treasury stock is sold for more than cost, the difference is credited to a new stockholders' equity account, Paid-In Capital from Treasury Stock Transactions. This excess is additional paid-in capital because it came from the company's stockholders. It has no effect on net income. Suppose Smart Touch Learning sold 200 of its treasury shares for $6 per share on April 2 (recall that cost was $5 per share). The entry to sell treasury stock for an amount above cost is as follows:

A↑	=	L	+	E↑
Cash↑				Treasury Stock↓ Paid-In Capital from Treasury Stock Transactions↑

Date	Accounts and Explanation	Debit	Credit
Apr. 2	Cash ($6 per share × 200 shares)	1,200	
	Treasury Stock—Common ($5 per share × 200 shares)		1,000
	Paid-In Capital from Treasury Stock Transactions ($1 per share × 200 shares)		200
	Sold treasury stock above cost.		

Treasury Stock—Common

Mar. 31	5,000		
		500	Apr. 1
		1,000	Apr. 2
Bal.	3,500		

Paid-In Capital from Treasury Stock Transactions

		200	Apr. 2

Paid-In Capital from Treasury Stock Transactions is reported with the other paid-in capital accounts on the balance sheet, beneath Common Stock and Paid-In Capital in Excess of Par.

Sale Below Cost

The sales price of treasury stock can be less than cost. The shortfall is debited first to Paid-In Capital from Treasury Stock Transactions. However, this account can only be debited for an amount that brings it to $0 (it cannot have a debit balance). If this account's balance is too small, Retained Earnings is debited for the remaining amount. To illustrate,

assume Smart Touch Learning had two additional treasury stock sales. First, on April 3, Smart Touch Learning sold 200 treasury shares for $4.30 each. The entry to record the sale is as follows:

Date	Accounts and Explanation	Debit	Credit
Apr. 3	Cash ($4.30 per share × 200 shares)	860	
	Paid-In Capital from Treasury Stock Transactions ($0.70 per share × 200 shares)	140	
	Treasury Stock—Common ($5 per share × 200 shares)		1,000
	Sold treasury stock below cost.		

A↑	=	L	+	E↑
Cash↑				Paid-In Capital from Treasury Stock Transactions↓ Treasury Stock↓

Treasury Stock—Common

Mar. 31	5,000		
		500	Apr. 1
		1,000	Apr. 2
		1,000	Apr. 3
Bal.	2,500		

Paid-In Capital from Treasury Stock Transactions

Apr. 3	140	200	Apr. 2
		60	Bal.

The treasury shares were sold for $140 less than their cost. Smart Touch Learning had previously sold treasury shares for $200 more than their cost, so the $200 credit balance in Paid-In Capital from Treasury Stock Transactions is large enough to cover the $140 debit.

Now, what happens if Smart Touch Learning sells an additional 200 treasury shares for $4.50 each on April 4? Smart Touch Learning records the following entry:

Date	Accounts and Explanation	Debit	Credit
Apr. 4	Cash ($4.50 per share × 200 shares)	900	
	Paid-In Capital from Treasury Stock Transactions	60	
	Retained Earnings ($1,000 – $900 – $60)	40	
	Treasury Stock—Common ($5 per share × 200 shares)		1,000
	Sold treasury stock below cost.		

A↑	=	L	+	E↑
Cash↑				Paid-In Capital from Treasury Stock Transactions↓ Retained Earnings↓ Treasury Stock↓

Treasury Stock—Common

Mar. 31	5,000		
		500	Apr. 1
		1,000	Apr. 2
		1,000	Apr. 3
		1,000	Apr. 4
Bal.	1,500		

Paid-In Capital from Treasury Stock Transactions

Apr. 3	140	200	Apr. 2
Apr. 4	60		
		0	Bal.

Retained Earnings

		3,550	Bal.
Apr. 4	40		
		3,510	Bal.

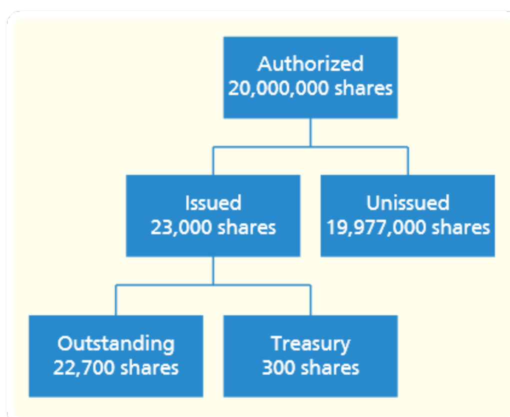
The 200 treasury shares are sold for $100 less than their cost [($4.50 sales price per share − $5 cost per share) × 200 shares]. However, only $60 remains in Paid-In Capital from Treasury Stock Transactions. The difference of $40 ($100 − $60) is debited to Retained Earnings because the paid-in capital accounts cannot have debit balances.

Now we can show the revised stockholders' equity for Smart Touch Learning as shown in Exhibit 13-7.

Exhibit 13-7 | Stockholders' Equity After Treasury Stock Transactions

SMART TOUCH LEARNING, INC. Balance Sheet (Partial) April 4, 2019	
Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	$ 50,000
Paid-In Capital in Excess of Par—Preferred	5,000
Common Stock—$1 Par Value; 20,000,000 shares authorized, 23,000 shares issued, 22,700 shares outstanding	23,000
Paid-In Capital in Excess of Par—Common	25,000
Total Paid-In Capital	103,000
Retained Earnings	3,510
Treasury Stock—Common; 300 shares at cost	(1,500)
Total Stockholders' Equity	$ 105,010

So, how many common shares are outstanding on April 4? The 23,000 common shares previously issued minus 300 treasury shares equals 22,700 outstanding common shares.



Retirement of Stock

Not all companies repurchase their previously issued stock to hold it in the treasury. A corporation may retire its stock by canceling the stock certificates. Retired stock cannot be reissued.

Retirements of preferred stock are common as companies seek to avoid paying the preferred dividends. To repurchase previously issued stock for retirement, we debit the stock accounts—for example, Preferred Stock and Paid-In Capital in Excess of Par—Preferred—and credit Cash. That removes the retired stock from the company's books, which reduces total assets and total stockholders' equity.

Try It!

7. On January 3, Halsall Corporation purchased 2,000 shares of the company's $2 par value common stock as treasury stock, paying cash of $8 per share. On January 30, Halsall sold 1,200 shares of the treasury stock for cash of $10 per share. Journalize these transactions.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S13-6. MyAccountingLab

HOW ARE DIVIDENDS AND STOCK SPLITS ACCOUNTED FOR?

Learning Objective 4

Account for cash dividends, stock dividends, and stock splits

A profitable corporation may make distributions to stockholders in the form of *dividends*. Dividends can be paid in the form of cash, stock, or other property.

Cash Dividends

Cash dividends cause a decrease in both assets (Cash) and equity (Retained Earnings). Most states prohibit using paid-in capital for dividends. Accountants, therefore, use the term **legal capital** to refer to the portion of stockholders' equity that cannot be used for dividends.

Legal Capital
The portion of stockholders' equity that cannot be used for dividends.

A corporation declares a dividend before paying it. Three dividend dates are relevant:

1. **Declaration date.** On the declaration date—say, May 1—the board of directors announces the intention to pay the dividend. The declaration of a cash dividend creates an obligation (liability) for the corporation.
2. **Date of record** (or *record date*). Those stockholders holding the stock at the end of business on the date of record—a week or two after declaration, say, May 15—will receive the dividend check. Date of record is the date the corporation records the stockholders that receive dividend checks.
3. **Payment date.** Payment of the dividend usually follows the record date by a week or two—say, May 30.

Declaring and Paying Dividends—Common Stock

Suppose on May 1, Smart Touch Learning declares a $0.05 per share cash dividend on 22,700 outstanding shares of common stock (23,000 shares issued less 300 shares of treasury stock). On the date of declaration, Smart Touch Learning records a debit to Cash Dividends and a credit to Dividends Payable—Common (a current liability) as follows:

A = L↑ + E↓
Dividends Payable↑ Cash Dividends↑

Date	Accounts and Explanation	Debit	Credit
May 1	Cash Dividends ($0.05 per share × 22,700 shares)	1,135	
	Dividends Payable—Common		1,135
	Declared a cash dividend.		

Dividends are only paid on outstanding shares. Remember that outstanding stock is issued stock less treasury stock. A corporation will never pay dividends on treasury stock.

On May 15, the date of record, no journal entry is recorded. This is simply the cutoff point to determine who owns the stock and will, therefore, receive the cash payment.

To pay the dividend on the payment date, May 30, Smart Touch Learning debits Dividends Payable—Common and credits Cash:

A↓ = L↓ + E
Cash↓ Dividends Payable↓

Date	Accounts and Explanation	Debit	Credit
May 30	Dividends Payable—Common	1,135	
	Cash		1,135
	Payment of cash dividend.		

At the end of the accounting period, Smart Touch Learning will close the Cash Dividends account to Retained Earnings as follows:

A = L + E↑↓
Retained Earnings↓ Cash Dividends↓

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Retained Earnings	1,135	
	Cash Dividends		1,135
	To close Cash Dividends.		

Declaring and Paying Dividends—Preferred Stock

The cash dividend rate on preferred stock is often expressed as a percentage of the preferred stock par value, such as 6%. Sometimes, however, cash dividends on preferred stock are expressed as a flat dollar amount per share, such as $3 per share. Therefore, preferred dividends are computed two ways, depending on how the preferred stock cash dividend rate is stated on the preferred stock certificate. To illustrate, assume a fictitious company, Greg's

Games, Inc. has 1,000 outstanding shares of 6%, $50 par value preferred stock. The dividend is computed as follows:

$$
\begin{aligned}
\text{Preferred dividend} &= \text{Outstanding shares} \times \text{Par value} \times \text{Preferred dividend rate} \\
&= 1{,}000 \text{ shares} \times \$50 \text{ par value per share} \times 6\% \\
&= \$3{,}000
\end{aligned}
$$

The journal entries to account for the declaration and payment of a cash dividend on preferred stock are similar to those of common stock. The only difference is that Dividends Payable—Preferred is used instead of Dividends Payable—Common.

Earlier in the chapter, we discussed the dividend preference that preferred stockholders receive. When a company has issued both preferred and common stock, the preferred stockholders receive their dividends first. The common stockholders receive dividends only if the total dividend is large enough to satisfy the preferred requirement. In other words, the common stockholders receive the residual—the amount remaining after the preferred dividends are paid.

For example, if Greg's Games has 1,000 shares of $50 par, 6% preferred stock outstanding and 2,000,000 shares of $1 par common stock outstanding, preferred stockholders will receive $3,000 of any cash dividend declared. So, total declared dividends must exceed $3,000 for the common stockholders to receive a dividend.

If the year's dividend is equal to or less than the annual preferred amount, the preferred stockholders will receive the entire dividend, and the common stockholders will not receive a dividend that year. But, if Greg's Games' dividend is large enough to cover the preferred dividend, the preferred stockholders get their regular dividend of $3,000, and the common stockholders receive any amount remaining.

Remember that a dividend preference on preferred stock does not guarantee that a corporation will pay a dividend equal to the preferred amount. A corporation may fail to pay the preferred dividend if, for example, it does not have cash to fund the dividend. This is called *passing the dividend*, and the dividend is said to be a **dividend in arrears**. In other words, a preferred stock dividend is in arrears if the dividend has not been paid for the year.

Preferred stock can be either cumulative or noncumulative. Most preferred stock is cumulative. As a result, preferred stock is assumed to be cumulative unless it is specifically designated as noncumulative. **Cumulative preferred stock** shareholders must receive all dividends in arrears plus the current year dividends before the common stockholders receive a dividend. If the preferred stock is **noncumulative preferred stock**, the corporation will not have any dividends in arrears because the corporation is not required to pay passed dividends.

Dividend in Arrears
A preferred stock dividend is in arrears if the dividend has not been paid for the year and the preferred stock is cumulative.

Cumulative Preferred Stock
Preferred stock whose owners must receive all dividends in arrears plus the current year dividend before the corporation pays dividends to the common stockholders.

Noncumulative Preferred Stock
Preferred stock whose owners do not receive passed dividends.

Suppose Greg's Games' preferred stock is cumulative and in 2018 the business did not pay any cash dividends. Before paying any common dividend in 2019, Greg's Games must first pay preferred dividends of $3,000 for 2018 and $3,000 for 2019, a total of $6,000. Assume that on September 6, 2019, Greg's Games declares a $50,000 total dividend. How much of this dividend goes to the preferred stockholders? How much goes to the common stockholders? The allocation of this $50,000 dividend is as follows:

Total Dividend		$ 50,000
Dividend to Preferred Stockholders:		
Dividend in Arrears (2018)	$ 3,000	
Current Year Dividend (2019)	3,000	
Total Dividend to Preferred Stockholders		(6,000)
Dividend to Common Stockholders		$ 44,000

Greg's Games' entry to record the declaration of this dividend on September 6, 2019, is as follows:

A	=	L↑	+	E↓
		Dividends Payable↑		Cash Dividends↑

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 6	Cash Dividends	50,000	
	Dividends Payable—Common		44,000
	Dividends Payable—Preferred		6,000
	Declared a cash dividend.		

Dividends in arrears are *not* a liability. A liability for dividends arises only after the board of directors *declares* the dividend. But a corporation reports cumulative preferred dividends in arrears in notes to the financial statements. This shows the common stockholders how big the declared dividend will need to be for them to receive any dividends.

Remember that if the preferred stock is noncumulative preferred stock, the corporation is not required to pay any passed dividends. Keep in mind that this is a risk that the investor bears when investing in noncumulative preferred stock. Suppose Greg's Games' preferred stock is noncumulative and the company passed the 2018 dividend. The preferred stockholders would lose the 2018 dividend of $3,000 forever. Then, before paying any common dividends in 2019, Greg's Games would have to pay only the 2019 preferred dividend of $3,000, which would leave $47,000 for the common stockholders as follows:

Total Dividend		$ 50,000
Dividend to Preferred Stockholders:		
Current Year Dividend (2019)	$ 3,000	
Total Dividend to Preferred Stockholders		(3,000)
Dividend to Common Stockholders		$ 47,000

Stock Dividends

Stock Dividend
A distribution by a corporation of its own stock to its stockholders.

A **stock dividend** is a distribution of a corporation's own stock to its stockholders. Unlike cash dividends, stock dividends do not give any of the corporation's assets, like cash, to the stockholders. Stock dividends have the following characteristics:

- They affect *only* stockholders' equity accounts (including Retained Earnings, Stock Dividends, Common Stock, and Paid-In Capital in Excess of Par).
- They have *no* effect on total stockholders' equity.
- They have *no* effect on assets or liabilities.

The corporation distributes stock dividends to stockholders in proportion to the number of shares the stockholders already own. Suppose a stockholder owns 1,000 shares of Greg's Games' common stock. If Greg's Games distributes a 10% stock dividend, the stockholder would receive 100 additional shares (1,000 shares × 0.10). The stockholder now owns 1,100 shares of the stock. All other Greg's Games' stockholders also receive additional shares equal to 10% of their stock holdings, so all stockholders are in the same relative position after the stock dividend as they were before. With a stock dividend, the total number of shares issued and outstanding increases, but the percentage of total ownership of individual stockholders stays the same.

Why Issue Stock Dividends?

A company issues stock dividends for several reasons:

- **To continue dividends but conserve cash.** A company may wish to continue the distribution of dividends to keep stockholders happy but may need to keep its cash for operations. A stock dividend is a way to do so without using corporate cash.
- **To reduce the market price per share of its stock.** Depending on its size, a stock dividend may cause the company's market price per share to fall because of the increased supply of the stock. Suppose that a share of Greg's Games' stock was traded at $50 recently. Doubling the shares issued and outstanding by issuing a stock dividend would likely cause Greg's Games' stock market price per share to drop closer to $25 per share. One objective behind a stock dividend might be to make the stock less expensive and, therefore, more available and attractive to investors.
- **To reward investors.** Investors often feel like they have received something of value when they get a stock dividend.

Recording Stock Dividends

As with a cash dividend, there are three dates for a stock dividend:

- Declaration date
- Record date
- Distribution date

The board of directors announces the stock dividend on the declaration date. The date of record and the distribution date then follow. The declaration of a stock dividend does *not* create a liability because the corporation is not obligated to pay assets. (Recall that a liability is a claim on *assets*.) With a stock dividend, the corporation has declared its intention to distribute its stock. The distribution date is similar to the payment date for a cash dividend. With stock dividends, however, there is no payment of cash—only a distribution of shares of stock.

The entry to record a stock dividend depends on the size of the dividend. Generally Accepted Accounting Principles (GAAP) distinguish between small and large stock dividends in the following manner:

- **Small stock dividend**—less than 20% to 25% of issued and outstanding stock
- **Large stock dividend**—greater than 20% to 25% of issued and outstanding stock

Small Stock Dividend
A stock dividend of less than 20% to 25% of the issued and outstanding stock.

Large Stock Dividend
A stock dividend greater than 20% to 25% of the issued and outstanding stock.

Small Stock Dividends—Less than 20% to 25% Small stock dividends are accounted for at the stock's market value. Here is how the various accounts are affected at the date of declaration:

- Stock Dividends is debited for the *market value* of the dividend shares.
- Common Stock Dividend Distributable is credited for the dividend stock's *par value*.
- Paid-In Capital in Excess of Par is credited for the excess.

Assume, for example, that Greg's Games distributes a 5% common stock dividend on 2,000,000 shares issued and outstanding when the market value of Greg's Games' common stock is $50 per share and par value is $1 per share. Greg's Games will issue 100,000 (2,000,000 shares × 0.05) shares to its stockholders. The entry on the next page illustrates the accounting for this 5% stock dividend on the declaration date of February 1.

A	=	L	+	E↑↓
				Stock Dividends↑ Common Stock Dividend Distributable↑ Paid-In Capital in Excess of Par↑

Date	Accounts and Explanation	Debit	Credit
Feb. 1	Stock Dividends ($50 per share × 2,000,000 shares × 0.05)	5,000,000	
	Common Stock Dividend Distributable ($1 per share × 2,000,000 shares × 0.05)		100,000
	Paid-In Capital in Excess of Par—Common ($5,000,000 − $100,000)		4,900,000
	Declared a 5% stock dividend.		

Similar to Cash Dividends, Stock Dividends is closed to Retained Earnings at the end of the accounting period.

Notice that Common Stock Dividend Distributable is credited for the par value of the common stock. Common Stock Dividend Distributable is an *equity* account, not a liability. It is reported as an addition to paid-in capital in stockholders' equity until the stock is distributed. On February 25, when Greg's Games distributes the common stock, it would record the following entry:

A	=	L	+	E↑↓
				Common Stock Dividend Distributable↓ Common Stock↑

Date	Accounts and Explanation	Debit	Credit
Feb. 25	Common Stock Dividend Distributable	100,000	
	Common Stock—$1 Par Value		100,000
	Issued 5% stock dividend.		

After the journal entry for the declaration and issuance of the common stock dividend and the closing entry to close Stock Dividends to Retained Earnings, Greg's Games' accounts are as follows:

Common Stock—$1 Par Value

		2,000,000	Bal.
		100,000	Feb. 25
		2,100,000	Bal.

Paid-In Capital in Excess of Par—Common

		19,000,000	Bal.
		4,900,000	Feb. 1
		23,900,000	Bal.

Common Stock Dividend Distributable

		100,000	Feb. 1
Feb. 25	100,000		
		0	Bal.

Retained Earnings

		9,000,000	Bal.
Dec. 31	5,000,000		
		4,000,000	Bal.

The stock Dividends account is closed with a credit and the corresponding debit to Retained Earnings decreases the equity account.

Remember that a stock dividend does not affect assets, liabilities, or *total* stockholders' equity. A stock dividend merely rearranges the balances in the stockholders' equity accounts, leaving total stockholders' equity unchanged. Exhibit 13-8 shows what Greg's Games' stockholders' equity looks like before and after the 5% common stock dividend.

Exhibit 13-8 | **Stockholders' Equity—Small Stock Dividend**

GREG'S GAMES, INC.
Balance Sheet (Partial)
February 25, 2019

Before Small Stock Dividend:		After Small Stock Dividend:	
Stockholders' Equity		**Stockholders' Equity**	
Paid-In Capital:		Paid-In Capital:	
Preferred Stock—$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	$ 50,000	Preferred Stock—$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	$ 50,000
Paid-In Capital in Excess of Par—Preferred	5,000	Paid-In Capital in Excess of Par—Preferred	5,000
Common Stock—$1 Par Value; 20,000,000 shares authorized, 2,000,000 shares issued and outstanding	2,000,000	Common Stock—$1 Par Value; 20,000,000 shares authorized, 2,100,000 shares issued and outstanding	2,100,000
Paid-In Capital in Excess of Par—Common	19,000,000	Paid-In Capital in Excess of Par—Common	23,900,000
Total Paid-In Capital	21,055,000	Total Paid-In Capital	26,055,000
Retained Earnings	9,000,000	Retained Earnings	4,000,000
Total Stockholders' Equity	$ 30,055,000	Total Stockholders' Equity	$ 30,055,000

Note that total stockholders' equity stays at $30,055,000. Total paid-in capital increased $5,000,000 and retained earnings decreased $5,000,000.

Large Stock Dividends—Greater than 20% to 25% Large stock dividends are rare, but when they are declared, they are normally accounted for at the stock's par value instead of the stock's market value. Par value is used because the larger number of issued and outstanding shares will reduce market price per share, making market price per share an invalid measurement of the stock dividend value. Assume, for example, on March 2 that Greg's Games declares a second common stock dividend of 50% when the market value of Greg's Games' common stock is $50 per share. The entries to record the large stock dividend on the declaration date (March 2) and distribution date (March 30) are as follows:

Date	Accounts and Explanation	Debit	Credit
Mar. 2	Stock Dividends ($1 per share × 2,100,000 shares × 0.50)	1,050,000	
	Common Stock Dividend Distributable		1,050,000
	($1 per share × 2,100,000 shares × 0. 50)		
	Declared a 50% stock dividend.		
30	Common Stock Dividend Distributable	1,050,000	
	Common Stock—$1 Par Value		1,050,000
	Issued 50% stock dividend.		

A = L + E↑↓
Stock Dividends↑
Common Stock Dividend Distributable↑

A = L + E↑↓
Common Stock Dividend Distributable↓
Common Stock↑

Cash dividends and stock dividends are always declared based on the number of shares issued and outstanding. It's important to keep a running balance of the amount of shares outstanding in order to determine the correct amount of dividends to record. In this case, Greg's Games started with 2,000,000 common shares outstanding and then issued a stock dividend of 100,000 common shares for a total of 2,100,000 common shares issued and outstanding.

Notice that the large stock dividend also does not change total stockholders' equity. Total paid-in capital increased $1,050,000 and retained earnings decreased $1,050,000 after closing Stock Dividends to Retained Earnings.

Stock Splits

Stock Split
An increase in the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock.

A stock split is fundamentally different from a stock dividend. A **stock split** increases the number of issued and outstanding shares of stock. A stock split also decreases par value per share, whereas stock dividends do not affect par value per share. For example, if Greg's Games splits its common stock 2-for-1, the number of issued and outstanding shares is doubled and par value per share is cut in half. A stock split also decreases the market price per share of the stock. A 2-for-1 stock split of a $2 par stock with a $20 market value per share will result in two shares of $1 par value with approximately $10 market value per share.

A stock split, just like any other stock issuance, cannot involve issuing more shares of stock than authorized in the corporate charter.

The market value of a share of Greg's Games' common stock has been approximately $50 per share. Assume that Greg's Games wishes to decrease the market price to approximately $25 per share. The company can make the market price drop to around $25 by effecting a 2-for-1 split of its common stock. A 2-for-1 stock split means that Greg's Games will have twice as many shares of stock issued and outstanding after the split as it did before, and each share's par value is cut in half. Assume Greg's Games has 3,150,000 shares issued and outstanding of $1 par common stock before the split. After the stock split, Greg's Games will have 6,300,000 shares (3,150,000 shares × 2) issued and outstanding of $0.50 par value stock ($1 par value / 2) as follows:

Common Stock Before Stock Split		Common Stock After Stock Split	
Common Stock—$1 Par Value; 3,150,000 shares issued and outstanding	$ 3,150,000	Common Stock—$0.50 Par Value; 6,300,000 shares issued and outstanding	$ 3,150,000

Memorandum Entry
An entry in the journal that notes a significant event, but has no debit or credit amount.

Because the stock split does not affect any account balances, no formal journal entry is needed. Instead, the split is recorded in a **memorandum entry**, an entry in the journal that notes a significant event but has no debit or credit amount.

Cash Dividends, Stock Dividends, and Stock Splits Compared

Cash dividends, stock dividends, and stock splits have some similarities and some differences. Exhibit 13-9 summarizes their effects on the accounting equation.

Exhibit 13-9 | **Effects of Dividends and Stock Splits on the Accounting Equation**

Effect On	Cash Dividend	Small Stock Dividend	Large Stock Dividend	Stock Split
Total Assets	Decrease	No effect	No effect	No effect
Total Liabilities	No effect	No effect	No effect	No effect
Common Stock	No effect	Increase	Increase	No effect
Paid-In Capital in Excess of Par	No effect	Increase	No effect	No effect
Retained Earnings	Decrease	Decrease	Decrease	No effect
Total Stockholders' Equity	Decrease	No effect	No effect	No effect

Try It!

8. On August 1, Hagino Corporation declared a $1.50 per share cash dividend on its common stock (20,000 shares) for stockholders on record as of August 15. Hagino paid the dividend on August 31. Journalize the entries declaring the cash dividend and paying the dividend.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S13-7 through S13-11. MyAccountingLab

HOW IS THE COMPLETE CORPORATE INCOME STATEMENT PREPARED?

Learning Objective 5
Prepare a corporate income statement including earnings per share

A corporation's income statement includes some unique items that do not often apply to smaller businesses. These unique items are listed after determining the corporation's income from continuing operations. We will review the fictitious company Kevin's Vintage Guitars, Inc.'s income statement for year ended December 31, 2018, shown in Exhibit 13-10, to illustrate these items.

Exhibit 13-10 | **Kevin's Vintage Guitars, Inc.—Income Statement**

KEVIN'S VINTAGE GUITARS, INC. Income Statement Year Ended December 31, 2018		
Net Sales	$ 500,000	
Cost of Goods Sold	240,000	
Gross Profit	260,000	
Operating Expenses	181,000	
Operating Income	79,000	Continuing Operations
Other Income and (Expenses):		
Gain on Sale of Equipment	11,000	
Income Before Income Taxes	90,000	
Income Tax Expense	36,000	
Income from Continuing Operations	54,000	
Discontinued Operations (less applicable tax of $14,000)	21,000	Special Items
Net Income	$ 75,000	
Earnings per Share of Common Stock (20,000 shares outstanding):		
Income from Continuing Operations	$ 2.70	
Income from Discontinued Operations	1.05	Earnings per Share
Net Income	$ 3.75	

Continuing Operations

In Exhibit 13-10, the first section reports continuing operations. This part of the business should continue from period to period. Income from continuing operations, therefore, helps investors make predictions about future earnings. We may use this information to predict that Kevin's Vintage Guitars, Inc. may earn approximately $54,000 next year.

The continuing operations of Kevin's Vintage Guitars, Inc. include two items that warrant explanation:

- Kevin's Vintage Guitars had a gain on the sale of equipment, which is outside the company's core business of selling vintage guitars. This is why the gain is reported in the "other" category—separately from Kevin's Vintage Guitars's operating income. Interest revenue and interest expense are examples of other items are included in this section.
- Income tax expense of $36,000 is subtracted to arrive at income from continuing operations. Kevin's Vintage Guitars's income tax rate is 40% ($90,000 × 0.40 = $36,000).

Discontinued Operations

After continuing operations, an income statement may include gains and losses from discontinued operations. These gains and losses occur when a company sells or disposes of an identifiable division (sometimes called a *segment of the business*). The gain or loss on discontinued operations is reported separately from continued operations because this type of disposal does not occur frequently. A company would report information on the segments that have been sold under the heading Discontinued Operations. In our example, income from discontinued operations of $35,000 is taxed at 40% and is reported net of its income tax effect as shown below.

Income from discontinued operations	$ 35,000
Less: Income tax expense (40%)	(14,000)
Discontinued operations	$ 21,000

Trace this item to the income statement in Exhibit 13-10. A loss on discontinued operations is reported similarly, but with a subtraction for the income tax *savings* on the loss (the tax savings reduces the loss).

Gains and losses on the normal sale of plant assets are *not* reported as discontinued operations. Instead, they are reported as "Other Income and (Expenses)" among continuing operations because companies dispose of old plant assets and equipment more frequently than business segments.

Earnings per Share

Earnings per Share (EPS)
Amount of a company's net income (loss) for each share of its outstanding common stock. (Net income − Preferred dividends) / Weighted average number of common shares outstanding.

The final segment of a corporate income statement reports the company's **earnings per share (EPS)**. EPS is the most widely used of all business statistics. EPS reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted average number of common shares outstanding. Preferred dividends are subtracted from net income because the preferred stockholders have the first claim to dividends. Therefore, that portion of the company's earnings is not available to the common stockholders and is not included in the EPS calculation on common stock. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding (beginning balance plus ending balance, divided by two).

A company that reports discontinued operations must report earnings per share for discontinued operations, either on the face of the income statement (as shown in Exhibit 13-10) or in the notes to the financial statements. Earnings per share for continuing operations must be reported on the face of the income statement.

Try It!

9. Rocky Corporation's accounting records include the following items, listed in no particular order, at December 31, 2018:

Other Income and (Expenses)	$ (6,000)	Cost of Goods Sold	$ 29,200
Net Sales Revenue	70,800	Operating Expenses	22,000
Gain on Discontinued Operations	4,800		

The income tax rate for Rocky Corporation is 30%. Prepare Rocky's income statement for the year ended December 31, 2018. Omit earnings per share. Use a multi-step format.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S13-12 and S13-13. MyAccountingLab

HOW IS EQUITY REPORTED FOR A CORPORATION?

Learning Objective 6
Explain how equity is reported for a corporation

Earlier, you learned that a corporation's equity contains two basic sources: paid-in capital and retained earnings. Let's explore how stockholders' equity is reported.

Statement of Retained Earnings

The statement of retained earnings reports how the company's retained earnings balance changed from the beginning of the period to the end of the period. Remember that retained earnings is the equity earned by profitable operations that is not distributed to stockholders. Exhibit 13-11 shows the statement of retained earnings of Smart Touch Learning for 2018.

Exhibit 13-11 | Statement of Retained Earnings

SMART TOUCH LEARNING, INC. Statement of Retained Earnings Two Months Ended December 31, 2018	
Retained Earnings, November 1, 2018	$ 0
Net income for two months	8,550
	8,550
Dividends declared	(5,000)
Retained Earnings, December 31, 2018	$ 3,550

Companies can report a negative amount in retained earnings. This is called a **deficit** and is reflected by a debit balance in the Retained Earnings account. A deficit occurs when a company has recurring losses and/or declares dividends in excess of retained earnings. Most states prohibit corporations from paying a dividend if a deficit will occur.

Deficit
Debit balance in the Retained Earnings account.

Appropriations of Retained Earnings

Cash dividends and treasury stock purchases require a cash payment. These cash outlays leave fewer resources to pay liabilities. For example, a bank may agree to loan $500,000 to a company only if the company maintains a minimum level of stockholders' equity by limiting both its declaration of dividends and its purchases of treasury stock. The restriction often focuses on the balance of retained earnings. Companies usually report their retained earnings restrictions in notes to the financial statements.

Appropriation of Retained Earnings
Restriction of a portion of retained earnings that is recorded by a journal entry.

Appropriations of retained earnings are retained earnings restrictions recorded by journal entries. A corporation may *appropriate*—that is, segregate in a separate account—a portion of retained earnings for a specific use. For example, the board of directors may appropriate part of retained earnings for expansion or contingencies (such as a potential liability associated with a lawsuit).

Prior-Period Adjustments

Prior-Period Adjustment
A correction to Retained Earnings for an error of an earlier period.

Occasionally a company may make an accounting error as a result of mathematical mistakes, misapplying accounting principles, or oversight that is not discovered until the following period. Once discovered, these errors must be corrected because the Retained Earnings account balance is wrong. The error is corrected by adjusting the beginning balance in the Retained Earnings account in the period the error is discovered. Corrections to Retained Earnings for errors of an earlier period are called **prior-period adjustments**. The prior-period adjustment either increases or decreases the beginning balance of the Retained Earnings account and appears on the statement of retained earnings.

To illustrate, assume a fictitious company, Mountain Home, Inc., recorded $30,000 of salaries expense for 2018. The correct amount of salaries expense was $40,000. This error had the following effect:

- Understated Salaries Expense by $10,000
- Overstated net income by $10,000

In 2019, Mountain Home paid the extra $10,000 in salaries owed for the prior year. Mountain Home's prior-period adjustment decreased Retained Earnings as shown in Exhibit 13-12.

Exhibit 13-12 | **Statement of Retained Earnings—Prior Period Adjustment**

MOUNTAIN HOME, INC. Statement of Retained Earnings Year Ended December 31, 2019	
Retained Earnings, January 1, 2019, as originally reported	$ 140,000
Prior period adjustment	(10,000)
Retained Earnings, January 1, 2019, as adjusted	130,000
Net income for the year	63,000
	193,000
Dividends declared	(23,000)
Retained Earnings, December 31, 2019	$ 170,000

Statement of Stockholders' Equity

The statement of stockholders' equity is another option for reporting the changes in stockholders' equity of a corporation. This statement has more information than the statement of retained earnings in that it reports the changes in all stockholders' equity accounts, not

just Retained Earnings. The statement of stockholders' equity shows the beginning balance, any additions or subtractions, and the ending balance for all equity accounts. In addition, the statement of stockholders' equity also reports the number of shares and any changes during the year in preferred, common, and treasury stock. Exhibit 13-13 shows a statement of stockholders' equity for Mountain Home, Inc.

IFRS requires a Statement of Stockholders' Equity, reporting the changes in all of the equity accounts.

Exhibit 13-13 | **Statement of Stockholders' Equity**

MOUNTAIN HOME, INC.
Statement of Stockholders' Equity
Year Ended December 31, 2019

	Common Stock		Paid-In Capital in Excess of Par	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balances, January 1, 2019, as originally reported	20,000	$ 20,000	$ 80,000	$ 140,000	$ 240,000
Prior period adjustment				(10,000)	(10,000)
Balances, January 1, 2019, as adjusted	20,000	$ 20,000	$ 80,000	$ 130,000	$ 230,000
Net income for the year				63,000	63,000
Dividends declared				(23,000)	(23,000)
Balances, December 31, 2019	20,000	$ 20,000	$ 80,000	$ 170,000	$ 270,000

Try It!

10. Sjostrom, Inc. had beginning retained earnings of $300,000 on January 1, 2018. During the year, Sjostrom declared and paid $140,000 of cash dividends and earned $200,000 of net income. Prepare a statement of retained earnings for Sjostrom, Inc. for the year ended December 31, 2018.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S13-14 and S13-15. MyAccountingLab

HOW DO WE USE STOCKHOLDERS' EQUITY RATIOS TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 7
Use earnings per share, rate of return on common stockholders' equity, and the price/earnings ratio to evaluate business performance

Investors are constantly comparing companies' profits. To compare companies of different sizes, we need some standard profitability measures. Three important ratios to use for comparison are earnings per share, rate of return on common stockholders' equity, and price/earnings ratio.

Earnings per Share

As discussed earlier in the chapter, the final segment of a corporate income statement reports the company's earnings per share. Earnings per share (EPS) reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted

average number of common shares outstanding. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding (beginning balance plus ending balance, divided by two).

For example, the **Kohl's Corporation** Fiscal 2015 Annual Report reports the following amounts:

(In millions)	January 30, 2016 (Fiscal year 2015)	January 31, 2015 (Fiscal year 2014)
Net Income (for the year ended)	$ 673	$ 867
Preferred Dividends	0	0
Total Stockholders' Equity	5,491	5,991
Stockholders' Equity attributable to Preferred Stock	0	0
Number of Common Shares Outstanding	186 shares	201 shares

Kohl's earnings per share for fiscal year 2015 is computed as follows:

Earnings per share = (Net income − Preferred dividends) / Average number of common shares outstanding
= ($673 − $0) / [(186 shares + 201 shares) / 2]
= $3.48 per share

FASB requires that earnings per share be reported on the income statement.

Price/Earnings Ratio

Price/Earnings Ratio
The ratio of the market price of a share of common stock to the company's earnings per share. Measures the value that the stock market places on $1 of a company's earnings. Market price per share of common stock / Earnings per share.

The **price/earnings ratio** is the ratio of the market price of a share of common stock to the company's earnings per share. The price/earnings ratio shows the market price of $1 of earnings. Assuming Kohl's Corporation has a market price of $37.00 per share of common stock, Kohl's price/earnings ratio for fiscal year 2015 is calculated as follows:

Price/earnings ratio = Market price per share of common stock / Earnings per share
= $37.00 per share / $3.48 per share
= 10.63

The price/earnings ratio implies that Kohl's stock is selling at 10.63 times one year's earnings per share. This ratio is commonly used by investors to evaluate their ability to earn a return on their investment. It tells investors how much they should be willing to pay for $1 of a company's earnings. A higher price/earnings ratio signifies a higher return on investment. As with other ratios, the price/earnings ratio is most useful when comparing one company to another.

Rate of Return on Common Stockholders' Equity

Rate of Return on Common Stockholders' Equity
Shows the relationship between net income available to common stockholders and their average common equity invested in the company. (Net income – Preferred dividends) / Average common stockholders' equity.

Rate of return on common stockholders' equity, often shortened to *return on equity*, shows the relationship between net income available to common stockholders and their average common equity invested in the company. The numerator is net income minus preferred dividends. Preferred dividends are subtracted because the preferred stockholders have first claim to any dividends. The denominator is average common stockholders' equity—total equity minus preferred equity.

Returning to Kohl's Corporation, the rate of return on common stockholders' equity for fiscal year 2015 is calculated as follows:

$$\begin{aligned}\text{Rate of return on common stockholders' equity} &= (\text{Net income} - \text{Preferred dividends}) \,/\, \text{Average common stockholders' equity}\\ &= (\$673 - \$0) \,/\, [(\$5{,}491 + \$5{,}991) \,/\, 2]\\ &= 0.12 = 12\%\end{aligned}$$

Kohl's has returned $0.12 for each $1 of the average amount invested by common stockholders. A rate of return on common stockholders' equity of 15% to 20% is considered good in most industries. At 12%, Kohl's has a return on equity that is lower, but it should be compared with companies in the same industry.

Try It!

Vollmer, Inc. had reported the following balances:

	December 31, 2019	December 31, 2018
Net Income	$ 80,000	$ 60,000
Preferred Dividends	2,000	5,000
Total Stockholders' Equity	340,000	310,000
Stockholders' Equity attributable to Preferred Stock	20,000	20,000
Number of Common Shares Outstanding	10,000	14,000

11. Compute Vollmer's earnings per share for 2019.
12. Compute Vollmer's price/earnings ratio for 2019, assuming the market price is $40 per share.
13. Compute Vollmer's rate of return on common stockholders' equity for 2019.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S13-16 through S13-18. MyAccountingLab

REVIEW

> Things You Should Know

1. What is a corporation?

- A business organized under state law that is a separate legal entity.
- Corporations have capital stock that represents shares of ownership.
  - Authorized stock is the maximum number of shares of stock that the corporate charter allows the corporation to issue.
  - Outstanding stock is stock that has been issued and is in the hands of stockholders.
- Corporations can have different classes of stock:
  - Common stock represents the basic ownership of a corporation.
  - Preferred stock gives its owners certain advantages, such as the right to receive preferential dividends.

- A corporation's equity is called stockholders' equity. Stockholders' equity consists of two basic sources:
  - Paid-in capital—amounts received from stockholders in exchange for stock.
  - Retained earnings—equity earned by profitable operations that is not distributed to stockholders.

2. How is the issuance of stock accounted for?

- Issuance of common stock (and preferred stock) at par value

Date	Accounts and Explanation	Debit	Credit
	Cash	Par Value	
	Common Stock—$1 Par Value		Par Value
	Issued common stock at par.		

- Issuance of common stock (and preferred stock) at a premium

Date	Accounts and Explanation	Debit	Credit
	Cash	Issuance Price	
	Common Stock—$1 Par Value		Par Value
	Paid-In Capital in Excess of Par—Common		Difference
	Issued common stock at a premium.		

- Issuing stated value stock is almost identical to accounting for par value stock. The only difference is the use of the Paid-In Capital in Excess of *Stated* account.
- Stock can be issued for assets other than cash. The transaction should be recorded at the market value of the stock issued or the market value of the assets received, whichever is more clearly determinable.

3. How is treasury stock accounted for?

- Treasury stock is a corporation's own stock that it has previously issued and later reacquired.
- When treasury stock is purchased, it is recorded at cost, not par value.

Date	Accounts and Explanation	Debit	Credit
	Treasury Stock—Common	Cost	
	Cash		Cost
	Purchased treasury stock.		

- Treasury Stock is a contra equity account, has a normal debit balance, and is a reduction to total stockholders' equity.
- Treasury stock can be sold at cost, below cost, or above cost.
- As an alternative to treasury stock, corporations can retire stock, which removes the stock from the company's books.

4. How are dividends and stock splits accounted for?

- Cash dividends cause a decrease in both assets (Cash) and equity (Retained Earnings).
- Preferred stockholders receive a dividend preference that ensures that the preferred stockholders will receive dividends first. There are two categories of preferred stock:
  - Cumulative preferred stock—owners must receive all dividends in arrears (passed dividends) and current year dividends before the corporation pays dividends to the common stockholders.
  - Noncumulative preferred stock—owners do not receive any passed dividends.
- Stock dividends are distributions of a corporation's stock and have no effect on total stockholders' equity, assets, or liabilities.
  - Small stock dividends (less than 20% to 25%) are recorded at the stock's market value.
  - Large stock dividends (greater than 20% to 25%) are recorded at the stock's par value.
- Stock splits increase the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock.
- Stock splits do not affect any account balances, and no journal entry is needed.

5. How is the complete corporate income statement prepared?

- A corporation's income statement includes the following unique items:
  - Income from Continuing Operations.
  - Discontinued Operations.
- Earnings per share for income from continuing operations must be reported on the face of the income statement.

6. How is equity reported for a corporation?

- The statement of retained earnings reports how the company's retained earnings balance changed from the beginning of the period to the end of the period.
- Retained earnings can be appropriated (set aside) for a specific use.
- Prior-period adjustments must be made to beginning retained earnings for mathematical mistakes, misapplied accounting principles, or oversight.
- The statement of stockholders' equity reports the changes in all stockholders' equity accounts.

7. How do we use stockholders' equity ratios to evaluate business performance?

- Earnings per share calculates the amount of a company's net income (loss) for each share of its outstanding common stock. (Net income – Preferred dividends) / Weighted average number of common shares outstanding.
- The price/earnings ratio measures the value that the stock market places on $1 of a company's earnings. Market price per share of common stock / Earnings per share.
- Rate of return on common stockholders' equity shows the relationship between net income available to common stockholders and their average common equity invested in the company. (Net income – Preferred dividends) / Average common stockholders' equity.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Delphian Corporation's balance sheet as of December 31, 2018, follows:

DELPHIAN CORPORATION Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 11,000,000 shares authorized, 8,000,000 shares issued and outstanding	$ 8,000,000
Paid-In Capital in Excess of Par—Common	200,000
Total Paid-In Capital	8,200,000
Retained Earnings	800,000,000
Total Stockholders' Equity	$ 808,200,000

During 2019, Delphian Corporation had the following transactions:

Jan. 1	Issued 10,000 shares of common stock for $10 per share.
Feb. 15	Issued 2,000 shares of common stock for $8 per share.
Mar. 1	Declared a $0.20 per share cash dividend on its common stock to be paid on March 30. Date of record: March 15.
30	Paid the cash dividend to stockholders.
Nov. 1	Declared a 1% common stock dividend on all common stock outstanding. Current market price of the stock was $8. Date of record: Nov. 15.
30	Distributed stock to stockholders.
Dec. 1	Purchased 5,000 shares of treasury stock—common at $12 per share.
20	Sold 3,000 shares of treasury stock—common at $14 per share.

Requirements

1. Journalize Delphian's transactions for 2019. (See Learning Objectives 2, 3, and 4)
2. Prepare the stockholders' equity section of the balance sheet as of December 31, 2019. Assume Delphian had net income of $20,000,000 during 2019 and that Cash Dividends and Stock Dividends have been closed to the Retained Earnings account. (See Learning Objectives 2, 3, 4, and 6)
3. Determine Delphian's earnings per share for 2019. (See Learning Objectives 5 and 7)
4. Assuming Delphian's market value per common share as of December 31, 2019, was $15, calculate Delphian's price/earnings ratio for 2019. (See Learning Objective 7)

> Solution

1.

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash ($10 per share × 10,000 shares)	100,000	
	Common Stock—$1 Par Value ($1 per share × 10,000 shares)		10,000
	Paid-In Capital in Excess of Par—Common ($9 per share × 10,000 shares)		90,000
	Issued common stock at a premium.		
Feb. 15	Cash ($8 per share × 2,000 shares)	16,000	
	Common Stock—$1 Par Value ($1 per share × 2,000 shares)		2,000
	Paid-In Capital in Excess of Par—Common ($7 per share × 2,000 shares)		14,000
	Issued common stock at a premium.		
Mar. 1	Cash Dividends ($0.20 per share × (8,000,000 shares + 10,000 shares + 2,000 shares))	1,602,400	
	Dividends Payable—Common		1,602,400
	Declared a cash dividend.		
15	*No entry recorded.*		
30	Dividends Payable—Common	1,602,400	
	Cash		1,602,400
	Payment of cash dividend.		
Nov. 1	Stock Dividends ($8 per share × 8,012,000 shares × 0.01)	640,960	
	Common Stock Dividend Distributable ($1 per share × 8,012,000 shares × 0.01)		80,120
	Paid-In Capital in Excess of Par—Common ($640,960 − $80,120)		560,840
	Declared a 1% stock dividend.		
15	*No entry recorded.*		
30	Common Stock Dividend Distributable	80,120	
	Common Stock—$1 Par Value		80,120
	Issued 1% stock dividend.		
Dec. 1	Treasury Stock—Common ($12 per share × 5,000 shares)	60,000	
	Cash		60,000
	Purchased treasury stock.		
20	Cash ($14 per share × 3,000 shares)	42,000	
	Treasury Stock—Common ($12 per share × 3,000 shares)		36,000
	Paid-In Capital from Treasury Stock Transactions ($2 per share × 3,000 shares)		6,000
	Sold treasury stock above cost.		

2.

DELPHIAN CORPORATION Balance Sheet (Partial) December 31, 2019		
Stockholders' Equity		
Paid-In Capital:		
Common Stock—$1 Par Value; 11,000,000 shares authorized, 8,092,120 shares issued, 8,090,120 outstanding	$	8,092,120
Paid-In Capital in Excess of Par—Common		864,840
Paid-In Capital in from Treasury Stock Transactions		6,000
Total Paid-In Capital		8,962,960
Retained Earnings		817,756,640
Treasury Stock at Cost		(24,000)
Total Stockholders' Equity		$ 826,695,600

Calculations:

Common stock—number of shares issued and outstanding:

Beginning balance, Jan. 1	8,000,000 shares
Stock issuance on Jan. 1	10,000
Stock issuance on Feb. 15	2,000
Shares outstanding before dividend	8,012,000
Stock dividend on Nov. 30 (8,012,000 × 0.01)	80,120
Common stock issued	8,092,120
Purchase of treasury stock on Dec. 1	(5,000)
Sale of treasury stock on Dec. 20	3,000
Common stock outstanding	8,090,120 shares

Paid-In Capital in Excess of Par:

Beginning balance, Jan. 1	$ 200,000
Stock issuance on Jan. 1	90,000
Stock issuance on Feb. 15	14,000
Stock dividend on Nov. 1	560,840
Total Paid-In Capital in Excess of Par	$ 864,840

Retained Earnings:

Beginning balance, Jan. 1	$ 800,000,000
Cash dividend on Mar. 1	(1,602,400)
Stock dividend on Nov. 1	(640,960)
Net income for the year	20,000,000
Ending balance, Dec. 31	$ 817,756,640

3. Earnings per share = (Net income − Preferred dividends) / Average number of common shares outstanding = ($20,000,000 − $0) / [(8,000,000 shares + 8,090,120 shares) / 2] = $2.49 per share

4. Price/earnings ratio = Market price per share of common stock / Earnings per share = $15 per share / $2.49 per share = 6.02

CHAPTER 13

> Key Terms

Appropriation of Retained Earnings (p. 696)
Authorized Stock (p. 673)
Capital Stock (p. 673)
Common Stock (p. 674)
Corporation (p. 672)
Cumulative Preferred Stock (p. 687)
Deficit (p. 695)
Dividend (p. 674)
Dividend in Arrears (p. 687)
Earnings per Share (EPS) (p. 694)
Issue Price (p. 676)
Issued Stock (p. 673)
Large Stock Dividend (p. 689)
Legal Capital (p. 685)
Memorandum Entry (p. 692)
No-Par Stock (p. 675)
Noncumulative Preferred Stock (p. 687)
Outstanding Stock (p. 674)
Paid-In Capital (p. 675)
Paid-In Capital in Excess of Par (p. 677)
Par Value (p. 675)
Preemptive Right (p. 674)
Preferred Stock (p. 675)
Premium (p. 677)
Price/Earnings Ratio (p. 698)
Prior-Period Adjustment (p. 696)
Rate of Return on Common Stockholders' Equity (p. 698)
Retained Earnings (p. 675)
Small Stock Dividend (p. 689)
Stated Value Stock (p. 675)
Stock Certificate (p. 673)
Stock Dividend (p. 688)
Stock Split (p. 692)
Stockholders' Equity (p. 675)
Treasury Stock (p. 681)
Underwriter (p. 676)

> Quick Check

1. Which characteristic of a corporation is a disadvantage?

Learning Objective 1

a. Mutual agency
b. Double taxation
c. Limited liability
d. None are disadvantages.

2. The two basic sources of stockholders' equity are

Learning Objective 1

a. assets and equity.
b. preferred and common.
c. retained earnings and dividends.
d. paid-in capital and retained earnings.

3. Suppose Value Home and Garden Imports issued 400,000 shares of $0.10 par common stock at $4 per share. Which journal entry correctly records the issuance of this stock?

Learning Objective 2

Date	Accounts and Explanation	Debit	Credit
a.	Common Stock—$0.10 Par Value	1,600,000	
	Cash		40,000
	Paid-In Capital in Excess of Par—Common		1,560,000
b.	Common Stock—$0.10 Par Value	1,600,000	
	Cash		1,600,000
c.	Cash	1,600,000	
	Common Stock—$0.10 Par Value		40,000
	Paid-In Capital in Excess of Par—Common		1,560,000
d.	Cash	1,600,000	
	Common Stock—$0.10 Par Value		1,600,000

4. Suppose Yummy Treats Bakery issues common stock in exchange for a building. Yummy Treats Bakery should record the building at

Learning Objective 2

a. the par value of the stock given.
b. its book value.
c. its market value.
d. a value assigned by the board of directors.

CHAPTER 13

Learning Objective 3

5. A company's own stock that it has issued and repurchased is called
   - **a.** outstanding stock.
   - **b.** dividend stock.
   - **c.** issued stock.
   - **d.** treasury stock.

Learning Objective 3

6. Assume that a company paid $6 per share to purchase 1,100 shares of its $3 par common stock as treasury stock. The purchase of treasury stock
   - **a.** increased total equity by $3,300.
   - **b.** decreased total equity by $3,300.
   - **c.** decreased total equity by $6,600.
   - **d.** increased total equity by $6,600.

Learning Objective 4

7. Winston Corporation has 9,000 shares of 4%, $10 par cumulative preferred stock and 47,000 shares of common stock outstanding. Winston declared no dividends in 2017 and had no dividends in arrears prior to 2017. In 2018, Winston declares a total dividend of $54,000. How much of the dividends go to the common stockholders?
   - **a.** $54,000
   - **b.** $50,400
   - **c.** $46,800
   - **d.** None; it all goes to preferred stockholders.

Learning Objective 4

8. A small stock dividend
   - **a.** decreases common stock.
   - **b.** has no effect on total equity.
   - **c.** increases Retained Earnings.
   - **d.** Items a, b, and c are correct.

Learning Objective 5

9. Which of the following is not included in continuing operations?
   - **a.** Loss on the sale of equipment
   - **b.** Gain on the sale on a segment of a business that has been discontinued
   - **c.** Salaries expense
   - **d.** Interest revenue

Learning Objective 6

10. Jackson Health Foods has 8,000 shares of $2 par common stock outstanding, which were issued at $15 per share. Jackson also has a deficit balance in Retained Earnings of $86,000. How much is Jackson's total stockholders' equity?
    - **a.** $16,000
    - **b.** $120,000
    - **c.** $206,000
    - **d.** $34,000

Learning Objective 7

11. Dale Corporation has the following data:

Net income	$ 24,000
Preferred dividends	12,000
Average common stockholders' equity	100,000

Dale's rate of return on common stockholders' equity is
   - **a.** 24%
   - **b.** 50%
   - **c.** 12%
   - **d.** 36%

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a corporation?
2. List three characteristics of a corporation.
3. How does authorized stock differ from outstanding stock?
4. What are the four basic rights of stockholders?
5. How does preferred stock differ from common stock?
6. What is par value?
7. What are the two basic sources of stockholders' equity? Describe each source.
8. What account is used to record the premium when issuing common stock? What type of account is this?
9. If stock is issued for assets other than cash, describe the recording of this transaction.
10. What is treasury stock? What type of account is Treasury Stock, and what is the account's normal balance?
11. Where and how is treasury stock reported on the balance sheet?
12. What is the effect on the accounting equation when cash dividends are declared? What is the effect on the accounting equation when cash dividends are paid?
13. What are the three relevant dates involving cash dividends? Describe each.
14. How does cumulative preferred stock differ from noncumulative preferred stock?
15. What is a stock dividend?
16. What is the effect on the accounting equation when a stock dividend is declared? What is the effect on the accounting equation when a stock dividend is distributed?
17. What are some reasons corporations issue stock dividends?
18. What is a stock split?
19. What is reported in the discontinued operations section of the income statement?
20. What does the statement of retained earnings report?
21. What is a prior-period adjustment?
22. What does the statement of stockholders' equity report? How does the statement of stockholders' equity differ from the statement of retained earnings?
23. What does earnings per share report, and how is it calculated?
24. What is the price/earnings ratio, and how is it calculated?
25. What does the rate of return on common stock show, and how is it calculated?

> Short Exercises

S13-1 Describing corporation characteristics

Learning Objective 1

Due to recent beef recalls, Southwest Steakhouse is considering incorporating. Bob, the owner, wants to protect his personal assets in the event the restaurant is sued.

Requirements

1. Which advantage of incorporating is most applicable? What are other advantages of organizing as a corporate entity?
2. What are some disadvantages of organizing as a corporation?

Learning Objective 2

S13-2 Journalizing issuance of stock—at par and at a premium

Colorado Corporation has two classes of stock: common, $3 par value; and preferred, $30 par value.

Requirements

1. Journalize Colorado's issuance of 4,500 shares of common stock for $6 per share.
2. Journalize Colorado's issuance of 4,500 shares of preferred stock for a total of $135,000.

Learning Objective 2

S13-3 Journalizing issuance of stock—no-par

Wolcott Corporation issued 5,000 shares of no-par common stock for $2 per share on January 13. Record the stock issuance.

Learning Objective 2

S13-4 Journalizing issuance of stock—stated value

Nelson Corporation issued 9,000 shares of $3 stated value common stock for $11 per share on July 7. Record the stock issuance.

Learning Objective 2

S13-5 Journalizing issuance of stock for assets other than cash

Cedar Corporation issued 36,000 shares of $1 par value common stock in exchange for a building with a market value of $160,000. Record the stock issuance.

Learning Objective 3

S13-6 Accounting for the purchase and sale of treasury stock

Discount Furniture, Inc. completed the following treasury stock transactions in 2018:

Dec. 1	Purchased 1,900 shares of the company's $1 par value common stock as treasury stock, paying cash of $5 per share.
15	Sold 200 shares of the treasury stock for cash of $8 per share.
20	Sold 1,000 shares of the treasury stock for cash of $1 per share. (Assume the balance in Paid-In Capital from Treasury Stock Transactions on December 20 is $2,400.)

Requirements

1. Journalize these transactions. Explanations are not required.
2. How will Discount Furniture, Inc. report treasury stock on its balance sheet as of December 31, 2018?

Learning Objective 4

S13-7 Accounting for cash dividends

Java Company earned net income of $85,000 during the year ended December 31, 2018. On December 15, Java declared the annual cash dividend on its 4% preferred stock (par value, $120,000) and a $0.25 per share cash dividend on its common stock (50,000 shares). Java then paid the dividends on January 4, 2019.

Requirements

1. Journalize for Java the entry declaring the cash dividends on December 15, 2018.
2. Journalize for Java the entry paying the cash dividends on January 4, 2019.

S13-8 Dividing cash dividends between preferred and common stock

Learning Objective 4

Copperhead Trust has the following classes of stock:

Preferred Stock—6%, $12 par value; 8,500 shares authorized, 7,000 shares issued and outstanding
Common Stock—$0.10 par value; 2,100,000 shares authorized, 1,400,000 shares issued and outstanding

Requirements

1. Copperhead declares cash dividends of $44,000 for 2018. How much of the dividends goes to preferred stockholders? How much goes to common stockholders?
2. Assume the preferred stock is cumulative and Copperhead passed the preferred dividend in 2016 and 2017. In 2018, the company declares cash dividends of $46,000. How much of the dividend goes to preferred stockholders? How much goes to common stockholders?
3. Assume the preferred stock is noncumulative and Copperhead passed the preferred dividend in 2016 and 2017. In 2018, the company declares cash dividends of $46,000. How much of the dividend goes to preferred stockholders? How much goes to common stockholders?

S13-9 Journalizing a small stock dividend

Learning Objective 4

Element Water Sports has 13,000 shares of $1 par value common stock outstanding. Element distributes a 5% stock dividend when the market value of its stock is $15 per share.

Requirements

1. Journalize Element's declaration of the stock dividend on August 15 and distribution on August 31.
2. What is the overall effect of the stock dividend on Element's total assets?
3. What is the overall effect on total stockholders' equity?

S13-10 Journalizing a large stock dividend

Learning Objective 4

Nelly, Inc. had 320,000 shares of $2 par value common stock issued and outstanding as of December 15, 2018. The company is authorized to issue 1,300,000 common shares. On December 15, 2018, Nelly declared a 40% stock dividend when the market value for Nelly's common stock was $7 per share. The stock was issued on Dec. 30.

Requirements

1. Journalize the declaration and distribution of the stock dividend.
2. How many shares of common stock are outstanding after the dividend?

Learning Objective 4

S13-11 Accounting for a stock split

Decor and More Imports recently reported the following stockholders' equity:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 490,000,000 shares authorized, 119,000,000 shares issued and outstanding	$ 119,000,000
Paid-In Capital in Excess of Par—Common	148,000,000
Total Paid-In Capital	267,000,000
Retained Earnings	654,000,000
Total Stockholders' Equity	$ 921,000,000

Suppose Decor and More split its common stock 2-for-1 in order to decrease the market price per share of its stock. The company's stock was trading at $17 per share immediately before the split.

Requirements

1. Prepare the stockholders' equity section of the Decor and More Imports balance sheet after the stock split.
2. Were the account balances changed or unchanged after the stock split?

Learning Objective 5

S13-12 Preparing a corporate income statement

ABC Corporation's accounting records include the following items, listed in no particular order, at December 31, 2018:

Other Income and (Expenses)	$ (7,200)	Cost of Goods Sold	$ 30,000
Net Sales	81,000	Operating Expenses	25,000
Gain on Discontinued Operations	3,600		

The income tax rate for ABC Corporation is 39%.

Prepare ABC's income statement for the year ended December 31, 2018. Omit earnings per share. Use the multi-step format.

Learning Objective 5

S13-13 Reporting earnings per share

Return to the ABC data in Short Exercise S13-12. ABC had 8,000 shares of common stock outstanding during 2018. ABC declared and paid preferred dividends of $4,000 during 2018.

Show how ABC reports EPS data on its 2018 income statement.

Learning Objective 6

S13-14 Preparing a statement of retained earnings

Kingston, Inc. had beginning retained earnings of $135,000 on January 1, 2018. During the year, Kingston declared and paid $85,000 of cash dividends and earned $75,000 of net income. Prepare a statement of retained earnings for Kingston, Inc. for the year ending December 31, 2018.

Learning Objective 6

S13-15 Analyzing the effect of prior-period adjustments

Taylor Corporation discovered in 2019 that it had incorrectly recorded in 2018 a cash payment of $70,000 for utilities expense. The correct amount of the utilities expense was $35,000.

Requirements

1. Determine the effect of the error on the accounting equation in 2018.
2. How should this error be reported in the 2019 financial statements?

S13-16 Computing earnings per share — Learning Objective 7

HEB Corporation had net income for 2018 of $60,450. HEB had 15,500 shares of common stock outstanding at the beginning of the year and 20,100 shares of common stock outstanding as of December 31, 2018. During the year, HEB declared and paid preferred dividends of $2,600. Compute HEB's earnings per share.

Note: Short Exercise S13-16 must be completed before attempting Short Exercise S13-17.

S13-17 Computing price/earnings ratio — Learning Objective 7

Refer to the HEB data in Short Exercise S13-17. Assume the market price of HEB's common stock is $19.50 per share. Compute HEB's price/earnings ratio.

S13-18 Computing rate of return on common stockholders' equity — Learning Objective 7

Wyler, Inc.'s 2018 balance sheet reported the following items—with 2017 figures given for comparison:

WYLER, INC.
Balance Sheet
As of December 31, 2018, and December 31, 2017

	December 31, 2018	December 31, 2017
Total Assets	$ 39,600	$ 33,462
Total Liabilities	17,100	14,962
Total Stockholders' Equity (all common)	22,500	18,500
Total Liabilities and Stockholders' Equity	$ 39,600	$ 33,462

Net income for 2018 was $3,690. Compute Wyler's rate of return on common stockholders' equity for 2018.

> Exercises

E13-19 Identifying advantages and disadvantages of a corporation — Learning Objective 1

Following is a list of advantages and disadvantages of the corporate form of business. Identify each quality as either an advantage or a disadvantage.

a. Ownership and management are separated.
b. Entity has continuous life.
c. Transfer of ownership is easy.
d. Stockholders' liability is limited.
e. Exposure to double taxation is evident.
f. Entity can raise more money than a partnership or sole proprietorship.
g. Government regulation is expensive.

Learning Objective 2

E13-20 Determining paid-in capital for a corporation

Aruba Corporation recently organized. The company issued common stock to an inventor in exchange for a patent with a market value of $57,000. In addition, Aruba received cash for 6,000 shares of its $10 par preferred stock at par value and 6,500 shares of its no-par common stock at $20 per share. Without making journal entries, determine the total *paid-in capital* created by these transactions.

Learning Objective 2

E13-21 Journalizing issuance of stock

Steller Systems completed the following stock issuance transactions:

May 19	Issued 1,700 shares of $3 par value common stock for cash of $10.50 per share.
Jun. 3	Issued 300 shares of $9, no-par preferred stock for $15,000 cash.
11	Received equipment with a market value of $68,000 in exchange for 5,000 shares of the $3 par value common stock.

Requirements

1. Journalize the transactions. Explanations are not required.
2. How much paid-in capital did these transactions generate for Steller Systems?

Learning Objective 2

1. a. Cash $104,000

E13-22 Journalizing issuance of no-par stock

Eates Corp. issued 8,000 shares of no-par common stock for $13 per share.

Requirements

1. Record issuance of the stock if the stock:
   a. is true no-par stock.
   b. has stated value of $3 per share.
2. Which type of stock results in more total paid-in capital?

Learning Objective 2

2. Total Stockholders' Equity $94,500

E13-23 Journalizing issuance of stock and preparing the stockholders' equity section of the balance sheet

The charter for ASAP-TV, Inc. authorizes the company to issue 100,000 shares of $5, no-par preferred stock and 500,000 shares of common stock with $1 par value. During its start-up phase, ASAP-TV completed the following transactions:

Sep. 6	Issued 550 shares of common stock to the promoters who organized the corporation, receiving cash of $16,500.
12	Issued 400 shares of preferred stock for cash of $23,000.
14	Issued 1,500 shares of common stock in exchange for land with a market value of $17,000.

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of the ASAP-TV balance sheet at September 30, 2018, assuming ASAP-TV, Inc. had net income of $38,000 for the month.

E13-24 Journalizing issuance of stock and preparing the stockholders' equity section of the balance sheet

Learning Objective 2

March 23 Common Stock $690

The charter of Evergreen Corporation authorizes the issuance of 900 shares of preferred stock and 1,400 shares of common stock. During a two-month period, Evergreen completed these stock-issuance transactions:

Mar. 23	Issued 230 shares of $3 par value common stock for cash of $15 per share.
Apr. 12	Received inventory with a market value of $27,000 and equipment with a market value of $19,000 for 320 shares of the $3 par value common stock.
17	Issued 900 shares of 5%, $20 par value preferred stock for $20 per share.

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of the Evergreen balance sheet as of April 30, 2018, for the transactions given in this exercise. Retained Earnings has a balance of $73,000 at April 30, 2018.

E13-25 Journalizing treasury stock transactions and reporting stockholders' equity

Learning Objective 3

2. Total Stockholders' Equity $52,000

Southern Amusements Corporation had the following stockholders' equity on November 30:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$5 Par Value; 1,300 shares authorized, 250 shares issued and outstanding	$ 1,250
Paid-In Capital in Excess of Par—Common	3,750
Total Paid-In Capital	5,000
Retained Earnings	50,000
Total Stockholders' Equity	$ 55,000

On December 30, Southern purchased 200 shares of treasury stock at $15 per share.

Requirements

1. Journalize the purchase of the treasury stock.
2. Prepare the stockholders' equity section of the balance sheet at December 31, 2018. Assume the balance in retained earnings is unchanged from November 30.
3. How many shares of common stock are outstanding after the purchase of treasury stock?

E13-26 Journalizing issuance of stock and treasury stock transactions

Learning Objectives 2, 3

May 22 Treasury Stock $16,900

Stock transactions for Careful Driving School, Inc. follow:

Mar. 4	Issued 27,000 shares of $1 par value common stock at $10 per share.
May 22	Purchased 1,300 shares of treasury stock—common at $13 per share.
Sep. 22	Sold 500 shares of treasury stock—common at $23 per share.
Oct. 14	Sold 800 shares of treasury stock—common at $9 per share.

Journalize the transactions.

Learning Objective 4

1. Preferred Dividend 2018 $9,000

E13-27 Computing dividends on preferred and common stock and journalizing

Northern Communications has the following stockholders' equity on December 31, 2018:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—5%, $11 Par Value; 150,000 shares authorized, 20,000 shares issued and outstanding	$ 220,000
Common Stock—$2 Par Value; 575,000 shares authorized, 380,000 shares issued and outstanding	760,000
Paid-In Capital in Excess of Par—Common	680,000
Total Paid-In Capital	1,660,000
Retained Earnings	200,000
Total Stockholders' Equity	$ 1,860,000

Requirements

1. Assuming the preferred stock is cumulative, compute the amount of dividends to preferred stockholders and to common stockholders for 2018 and 2019 if total dividends are $9,000 in 2018 and $45,000 in 2019. Assume no changes in preferred stock and common stock in 2019.
2. Record the journal entries for 2018, assuming that Northern Communications declared the dividend on December 1 for stockholders of record on December 10. Northern Communications paid the dividend on December 20.

Learning Objective 4

2. July 1 Cash Dividends $185,000

E13-28 Computing dividends on preferred and common stock and journalizing

The following elements of stockholders' equity are from the balance sheet of Sneed Marketing Corp. at December 31, 2017:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—4%, $2 Par Value; 80,000 shares authorized, 55,000 shares issued and outstanding	$ 110,000
Common Stock—$0.10 Par Value; 8,750,000 shares authorized, 8,000,000 shares issued and outstanding	800,000

Sneed paid no preferred dividends in 2017.

Requirements

1. Compute the dividends to the preferred and common shareholders for 2018 if total dividends are $185,000 and assuming the preferred stock is noncumulative. Assume no changes in preferred and common stock in 2018.
2. Record the journal entries for 2018 assuming that Sneed Marketing Corp. declared the dividends on July 1 for stockholders of record on July 15. Sneed paid the dividends on July 31.

CHAPTER 13

E13-29 Journalizing a stock dividend and reporting stockholders' equity

Learning Objective 4

2. Total Stockholders' Equity $122,000

The stockholders' equity of Lakeside Occupational Therapy, Inc. on December 31, 2017, follows:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 1,200 shares authorized, 400 shares issued and outstanding	$ 400
Paid-In Capital in Excess of Par—Common	1,600
Total Paid-In Capital	2,000
Retained Earnings	120,000
Total Stockholders' Equity	$ 122,000

On April 30, 2018, the market price of Lakeside's common stock was $16 per share and the company declared a 13% stock dividend. The stock was distributed on May 15.

Requirements

1. Journalize the declaration and distribution of the stock dividend.
2. Prepare the stockholders' equity section of the balance sheet as of May 31, 2018. Assume Retained Earnings are $120,000 on April 30, 2018, before the stock dividend, and the only change made to Retained Earnings before preparing the balance sheet was closing the Stock Dividends account.

E13-30 Journalizing cash and stock dividends

Learning Objective 4

1. Common Stock $20,440

Self-Defense Schools, Inc. is authorized to issue 200,000 shares of $2 par common stock. The company issued 73,000 shares at $5 per share. When the market price of common stock was $7 per share, Self-Defense Schools declared and distributed a 14% stock dividend. Later, Self-Defense Schools declared and paid a $0.70 per share cash dividend.

Requirements

1. Journalize the declaration and the distribution of the stock dividend.
2. Journalize the declaration and the payment of the cash dividend.

E13-31 Reporting stockholders' equity after a stock split

Learning Objective 4

Total Stockholders' Equity $3,410

Wood Golf Club Corp. had the following stockholders' equity at December 31, 2017:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 650 shares authorized, 270 shares issued and outstanding	$ 270
Paid-In Capital in Excess of Par—Common	540
Total Paid-In Capital	810
Retained Earnings	2,600
Total Stockholders' Equity	$ 3,410

On June 30, 2018, Wood Golf Club split its common stock 2-for-1. Prepare the stockholders' equity section of the balance sheet immediately after the split. Assume the balance in retained earnings is unchanged from December 31, 2017.

Learning Objective 4

E13-32 Determining the effects of cash dividends, stock dividends, and stock splits

Complete the following chart by inserting a check mark (√) for each statement that is true.

	Cash dividend	Stock dividend	Stock split
Decreases retained earnings			
Has no effect on a liability			
Increases paid-in capital by the same amount that it decreases retained earnings			
Decreases both total assets and total stockholders' equity			
Has no effect on total stockholders' equity			

Learning Objectives 3, 4

E13-33 Determining the effect of stock dividends, stock splits, and treasury stock transactions

Many types of transactions may affect stockholders' equity. Identify the effects of the following transactions on total stockholders' equity. Each transaction is independent.

a. A 10% stock dividend. Before the dividend, 540,000 shares of $1 par value common stock were outstanding; market value was $9 per share at the time of the dividend.

b. A 2-for-1 stock split. Prior to the split, 66,000 shares of $5 par value common stock were outstanding.

c. Purchase of 1,100 shares of $0.50 par treasury stock at $6 per share.

d. Sale of 600 shares of $0.50 par treasury stock for $9 per share. Cost of the treasury stock was $7 per share.

Learning Objective 5

Net Income $167,000

E13-34 Preparing a multi-step income statement

Clix Photographic Supplies, Inc.'s accounting records include the following for 2018:

Income Tax Savings—Loss on Discontinued Operations	$ 12,000	Net Sales	$ 525,000
Loss on Discontinued Operations	30,000	Operating Expenses (Including Income Tax)	100,000
		Cost of Goods Sold	240,000

Prepare Clix's multi-step income statement for the year ending December 31, 2018. Omit earnings per share.

Learning Objective 5

Net Income $10.80

E13-35 Computing earnings per share

Faccone Academy Surplus had 60,000 shares of common stock and 9,000 shares of 20%, $15 par value preferred stock outstanding through December 31, 2018. Income from continuing operations for 2018 was $711,000, and loss on discontinued operations (net of income tax saving) was $36,000.

Compute Faccone's earnings per share for 2018, starting with income from continuing operations. Round to the nearest cent.

E13-36 Preparing a statement of retained earnings

Learning Objective 6

Retained Earnings Dec. 31, 2018 $93,000

Kelly May Bakery, Inc. reported a prior-period adjustment in 2018. An accounting error caused net income of prior years to be overstated by $1,000. Retained Earnings at December 31, 2017, as previously reported, was $48,000. Net income for 2018 was $74,000, and dividends declared were $28,000. Prepare the company's statement of retained earnings for the year ended December 31, 2018.

E13-37 Computing earnings per share and price/earnings ratio

Learning Objective 7

Rocket Corp. earned net income of $153,040 and paid the minimum dividend to preferred stockholders for 2018. Assume that there are no changes in common shares outstanding during 2018. Rocket's books include the following figures:

Preferred Stock—6%, $60 par value; 2,000 shares authorized, 1,000 shares issued and outstanding	$ 60,000
Common Stock—$5 par value; 80,000 shares authorized, 48,000 shares issued, 46,700 shares outstanding	240,000
Paid-In Capital in Excess of Par—Common	470,000
Treasury Stock—Common; 1,300 shares at cost	(26,000)

Requirements

1. Compute Rocket's EPS for the year.
2. Assume Rocket's market price of a share of common stock is $12 per share. Compute Rocket's price/earnings ratio.

E13-38 Computing rate of return on common stockholders' equity

Learning Objective 7

LaSalle Exploration Company reported these figures for 2018 and 2017:

	2018	2017
Income Statement—partial:		
Net Income	$ 14,800	$ 19,200
	Dec. 31, 2018	**Dec. 31, 2017**
Balance Sheet—partial:		
Total Assets	$ 323,000	$ 314,000
Preferred Stock	$ 2,100	$ 2,100
Common Stock	178,000	168,000
Retained Earnings	11,000	7,000
Total Stockholders' Equity	$ 191,100	$ 177,100

Compute rate of return on common stockholders' equity for 2018 assuming no dividends were declared or paid to preferred stockholders.

> Problems Group A

Learning Objectives 1, 2

P13-39A Organizing a corporation and issuing stock

Montel and Jeremy are opening a paint store. There are no competing paint stores in the area. They must decide how to organize the business. They anticipate profits of $350,000 the first year, with the ability to sell franchises in the future. Although they have enough to start the business now as a partnership, cash flow will be an issue as they grow. They feel the corporate form of operation will be best for the long term. They seek your advice.

Requirements

1. What is the main advantage they gain by selecting a corporate form of business now?
2. Would you recommend they initially issue preferred or common stock? Why?
3. If they decide to issue $5 par common stock and anticipate an initial market price of $20 per share, how many shares will they need to issue to raise $2,750,000?

Learning Objectives 1, 2, 4

4. Common stock dividends $402,000

P13-40A Identifying sources of equity, stock issuance, and dividends

Voyage Comfort Specialists, Inc. reported the following stockholders' equity on its balance sheet at June 30, 2018:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—7%, ? Par Value; 625,000 shares authorized, 280,000 shares issued and outstanding	$ 1,400,000
Common Stock—$1 Par Value; 3,000,000 shares authorized, 1,340,000 shares issued and outstanding	1,340,000
Paid-In Capital in Excess of Par—Common	2,900,000
Total Paid-In Capital	5,640,000
Retained Earnings	12,000,000
Total Stockholders' Equity	$ 17,640,000

Requirements

1. Identify the different classes of stock that Voyage Comfort Specialists has outstanding.
2. What is the par value per share of Voyage Comfort Specialists' preferred stock?
3. Make two summary journal entries to record issuance of all the Voyage Comfort Specialists' stock for cash. Explanations are not required.
4. No preferred dividends are in arrears. Journalize the declaration of a $500,000 dividend at June 30, 2018, and the payment of the dividend on July 20, 2018. Use separate Dividends Payable accounts for preferred and common stock. An explanation is not required.

CHAPTER 13

P13-41A Journalizing stock issuance and cash dividends and preparing the stockholders' equity section of the balance sheet

Learning Objectives 2, 4

2. Total Stockholders' Equity $454,000

D-Mobile Wireless needed additional capital to expand, so the business incorporated. The charter from the state of Georgia authorizes D-Mobile to issue 50,000 shares of 8%, $50 par value cumulative preferred stock and 160,000 shares of $4 par value common stock. During the first month, D-Mobile completed the following transactions:

Oct. 2	Issued 19,000 shares of common stock for a building with a market value of $240,000.
6	Issued 600 shares of preferred stock for $140 per share.
9	Issued 11,000 shares of common stock for cash of $55,000.
10	Declared a $19,000 cash dividend for stockholders of record on Oct. 20. Use a separate Dividends Payable account for preferred and common stock.
25	Paid the cash dividend.

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of D-Mobile's balance sheet at October 31, 2018. Assume D-Mobile's net income for the month was $94,000.

P13-42A Journalizing dividends and treasury stock transactions and preparing the stockholders' equity section of the balance sheet

Learning Objectives 3, 4

Nov. 8 Treasury Stock $4,000

Deerborn Manufacturing Co. completed the following transactions during 2018:

Jan. 16	Declared a cash dividend on the 6%, $103 par noncumulative preferred stock (1,050 shares outstanding). Declared a $0.20 per share dividend on the 100,000 shares of $2 par value common stock outstanding. The date of record is January 31, and the payment date is February 15.
Feb. 15	Paid the cash dividends.
Jun. 10	Split common stock 2-for-1.
Jul. 30	Declared a 30% stock dividend on the common stock. The market value of the common stock was $9 per share.
Aug. 15	Distributed the stock dividend.
Oct. 26	Purchased 1,000 shares of treasury stock at $8 per share.
Nov. 8	Sold 500 shares of treasury stock for $10 per share.
30	Sold 300 shares of treasury stock for $4 per share.

Requirements

1. Record the transactions in Deerborn's general journal.
2. Prepare the Deerborn's stockholders' equity section of the balance sheet as of December 31, 2018. Assume that Deerborn was authorized to issue 2,600 shares of preferred stock and 400,000 shares of common stock. Both preferred stock and common stock were issued at par. The ending balance of retained earnings as of December 31, 2018, is $2,060,000.

Learning Objective 5

Net Income $65,500

P13-43A Preparing an income statement

The following information was taken from the records of Chua Motorsports, Inc. at November 30, 2018:

Selling Expenses	$ 110,000	Common Stock, $12 Par Value, 10,000 shares authorized and issued	$ 120,000
Administrative Expenses	115,000	Preferred Stock, $7 No-Par Value, 7,000 shares issued	490,000
Income from Discontinued Operations	2,500	Income Tax Expense: Continuing Operations	20,000
Cost of Goods Sold	510,000	Income Tax Expense: Income from Discontinued Operations	1,000
Treasury Stock—Common (5,000 shares)	75,000		
Net Sales Revenue	819,000		

Prepare a multi-step income statement for Chua Motorsports for the fiscal year ended November 30, 2018. Include earnings per share.

Learning Objectives 3, 4, 6

2. Retained Earnings Dec. 31, 2018 $126,550

P13-44A Journalizing dividend and treasury stock transactions, preparing a statement of retained earnings, and preparing stockholders' equity

The balance sheet of Goldstein Management Consulting, Inc. at December 31, 2017, reported the following stockholders' equity:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$10 Par Value; 350,000 shares authorized, 32,000 shares issued and outstanding	$ 320,000
Paid-In Capital in Excess of Par—Common	330,000
Total Paid-In Capital	650,000
Retained Earnings	160,000
Total Stockholders' Equity	$ 810,000

During 2018, Goldstein completed the following selected transactions:

Feb. 6	Declared a 15% stock dividend on common stock. The market value of Goldstein's stock was $25 per share.
15	Distributed the stock dividend.
Jul. 29	Purchased 2,300 shares of treasury stock at $25 per share.
Nov. 27	Declared a $0.10 per share cash dividend on the common stock outstanding.

Requirements

1. Record the transactions in the general journal.
2. Prepare a retained earnings statement for the year ended December 31, 2018. Assume Goldstein's net income for the year was $90,000.
3. Prepare the stockholders' equity section of the balance sheet at December 31, 2018.

CHAPTER 13

P13-45A Computing earnings per share, price/earnings ratio, and rate of return on common stockholders' equity

Learning Objective 7

Bianchi Company reported these figures for 2018 and 2017:

	2018	2017
Income Statement—partial:		
Net Income	$ 34,380	$ 18,000
	Dec. 31, 2018	**Dec. 31, 2017**
Balance Sheet—partial:		
Total Assets	$ 285,000	$ 280,000
Paid-In Capital:		
Preferred Stock—11%, $9 Par Value; 60,000 shares authorized, 12,000 shares issued and outstanding	$ 108,000	$ 108,000
Common Stock—$2 Par Value; 60,000 shares authorized, 50,000 shares issued and outstanding	100,000	100,000
Paid-In Capital in Excess of Par—Common	14,000	14,000
Retained Earnings	60,500	38,000
Total Stockholders' Equity	$ 282,500	$ 260,000

Requirements

1. Compute Bianchi Company's earnings per share for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest cent.
2. Compute Bianchi Company's price/earnings ratio for 2018. Assume the company's market price per share of common stock is $9. Round to two decimals.
3. Compute Bianchi Company's rate of return on common stockholders' equity for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest whole percent.

> Problems Group B

P13-46B Organizing a corporation and issuing stock

Learning Objectives 1, 2

Jimmy and Randy are opening a comic store. There are no competing comic stores in the area. They must decide how to organize the business. They anticipate profits of $550,000 the first year, with the ability to sell franchises in the future. Although they have enough to start the business now as a partnership, cash flow will be an issue as they grow. They feel the corporate form of operation will be best for the long term. They seek your advice.

Requirements

1. What is the main advantage they gain by selecting a corporate form of business now?
2. Would you recommend they initially issue preferred or common stock? Why?
3. If they decide to issue $3 par common stock and anticipate an initial market price of $75 per share, how many shares will they need to issue to raise $3,000,000?

Learning Objectives 1, 2, 4

4. Common stock dividends $135,000

P13-47B Identifying sources of equity, stock issuance, and dividends

Tillman Comfort Specialists, Inc. reported the following stockholders' equity on its balance sheet at June 30, 2018:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—5%, ? Par Value; 625,000 shares authorized, 325,000 shares issued and outstanding	$ 1,300,000
Common Stock—$1 Par Value; 7,000,000 shares authorized, 1,350,000 shares issued and outstanding	1,350,000
Paid-In Capital in Excess of Par—Common	2,600,000
Total Paid-In Capital	5,250,000
Retained Earnings	11,800,000
Total Stockholders' Equity	$ 17,050,000

Requirements

1. Identify the different classes of stock that Tillman Comfort Specialists has outstanding.
2. What is the par value per share of Tillman Comfort Specialists' preferred stock?
3. Make two summary journal entries to record issuance of all the Tillman Comfort Specialists stock for cash. Explanations are not required.
4. No preferred dividends are in arrears. Journalize the declaration of a $200,000 dividend at June 30, 2018, and the payment of the dividend on July 20, 2018. Use separate Dividends Payable accounts for preferred and common stock. An explanation is not required.

Learning Objectives 2, 4

2. Total Stockholders' Equity $530,000

P13-48B Journalizing stock issuance and cash dividends and preparing the stockholders' equity section of the balance sheet

C-Mobile Wireless needed additional capital to expand, so the business incorporated. The charter from the state of Georgia authorizes C-Mobile to issue 120,000 shares of 9%, $150 par value cumulative preferred stock, and 140,000 shares of $3 par value common stock. During the first month, C-Mobile completed the following transactions:

Oct. 2	Issued 18,000 shares of common stock for a building with a market value of $260,000.
6	Issued 650 shares of preferred stock for $160 per share.
9	Issued 14,000 shares of common stock for cash of $84,000.
10	Declared a $13,000 cash dividend for stockholders of record on Oct. 20. Use a separate Dividends Payable account for preferred and common stock.
25	Paid the cash dividend.

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of C-Mobile's balance sheet at October 31, 2018. Assume C-Mobile's net income for the month was $95,000.

P13-49B Journalizing dividends and treasury stock transactions and preparing the stockholders' equity section of the balance sheet

Learning Objectives 3, 4

1. Nov. 8 Treasury Stock $36,000

Halborn Manufacturing Co. completed the following transactions during 2018:

Jan. 16	Declared a cash dividend on the 6%, $97 par noncumulative preferred stock (1,150 shares outstanding). Declared a $0.20 per share dividend on the 80,000 shares of $8 par value common stock outstanding. The date of record is January 31, and the payment date is February 15.
Feb. 15	Paid the cash dividends.
Jun. 10	Split common stock 2-for-1.
Jul. 30	Declared a 40% stock dividend on the common stock. The market value of the common stock was $8 per share.
Aug. 15	Distributed the stock dividend.
Oct. 26	Purchased 8,000 shares of treasury stock at $9 per share.
Nov. 8	Sold 4,000 shares of treasury stock for $10 per share.
30	Sold 1,400 shares of treasury stock for $5 per share.

Requirements

1. Record the transactions in Halborn's general journal.
2. Prepare the Halborn's stockholders' equity section of the balance sheet as of December 31, 2018. Assume that Halborn was authorized to issue 2,200 shares of preferred stock and 500,000 shares of common stock. Both preferred stock and common stock were issued at par. The ending balance of retained earnings as of December 31, 2018, is $2,030,000.

P13-50B Preparing an income statement

Learning Objective 5

Net Income $37,840

The following information was taken from the records of Arizona Motorsports, Inc. at November 30, 2018:

Selling Expenses	$ 95,000	Common Stock, $11 Par Value, 13,500 shares authorized and issued	$ 148,500
Administrative Expenses	150,000	Preferred Stock, $2 No-Par Value, 2,000 shares issued	60,000
Income from Discontinued Operations	2,400	Income Tax Expense: Continuing Operations	50,000
Cost of Goods Sold	470,000	Income Tax Expense: Income from Discontinued Operations	960
Treasury Stock—Common (1,500 shares)	19,500		
Net Sales Revenue	801,400		

Prepare a multi-step income statement for Arizona Motorsports for the fiscal year ended November 30, 2018. Include earnings per share.

CHAPTER 13

Learning Objectives 3, 4, 6

2. Retained Earnings Dec. 31, 2018 $218,280

P13-51B Journalizing dividend and treasury stock transactions, preparing a statement of retained earnings, and preparing stockholders' equity

The balance sheet of Cullins Management Consulting, Inc. at December 31, 2017, reported the following stockholders' equity:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$10 Par Value; 200,000 shares authorized, 22,000 shares issued and outstanding	$ 220,000
Paid-In Capital in Excess of Par—Common	360,000
Total Paid-In Capital	580,000
Retained Earnings	163,000
Total Stockholders' Equity	$ 743,000

During 2018, Cullins completed the following selected transactions:

Feb. 6	Declared a 5% stock dividend on common stock. The market value of Cullins's stock was $25 per share.
15	Distributed the stock dividend.
Jul. 29	Purchased 2,000 shares of treasury stock at $25 per share.
Nov. 27	Declared a $0.20 per share cash dividend on the common stock outstanding.

Requirements

1. Record the transactions in the general journal.
2. Prepare a retained earnings statement for the year ended December 31, 2018. Assume Cullins's net income for the year was $87,000.
3. Prepare the stockholders' equity section of the balance sheet at December 31, 2018.

Learning Objective 7

P13-52B Computing earnings per share, price/earnings ratio, and rate of return on common stockholders' equity

Gullo Company reported these figures for 2018 and 2017:

	2018	2017
Income Statement—partial:		
Net Income	$ 18,900	$ 24,000
	Dec. 31, 2018	**Dec. 31, 2017**
Balance Sheet—partial:		
Total Assets	$ 285,000	$ 200,000
Paid-In Capital:		
Preferred Stock—11%, $9 Par Value; 60,000 shares authorized, 10,000 shares issued and outstanding	$ 90,000	$ 90,000
Common Stock—$1 Par Value; 45,000 shares authorized, 30,000 shares issued and outstanding	30,000	30,000
Paid-In Capital in Excess of Par—Common	14,000	14,000
Retained Earnings	51,000	42,000
Total Stockholders' Equity	$ 185,000	$ 176,000

Requirements

1. Compute Gullo Company's earnings per share for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest cent.
2. Compute Gullo Company's price/earnings ratio for 2018. Assume the company's market price per share of common stock is $9. Round to two decimals.
3. Compute Gullo Company's rate of return on common stockholders' equity for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest whole percent.

CRITICAL THINKING

> Using Excel

P13-53 Using Excel for stockholders' equity transactions and preparing financial statements

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

Naxion Corporation began operations on January 2, 2018, and had the following transactions during the year:

Jan. 2	Issued 250,000 shares of $1 par value common stock at $45 per share. Total shares authorized: 1,000,000.
Feb. 5	Issued 10,000 shares of $50 par, 5% cumulative preferred stock at $65 per share. Total shares authorized: 25,000.
Mar. 15	Issued 150,000 shares of $1 par value common stock at $35 per share.
Apr. 2	Declared a $2.50 per share cash dividend on its preferred stock to be paid on April 25. Date of record is April 10.
3	Declared a $0.10 per share cash dividend on its common stock to be paid on April 26. Date of record is April 10.
25	Payment of cash dividend on preferred stock.
26	Payment of cash dividend on common stock.
Jun. 1	Declared a 2% stock dividend on all common stock outstanding. Current market price of the stock was $48 per share. Date of record is June 15.
30	Distributed common stock dividend to shareholders.
Oct. 10	Purchased 2,500 shares of treasury stock—common at $52 per share.
Nov. 15	Sold 2,000 shares of treasury stock—common at $54 per share.

Requirements

1. Journalize Naxion's transactions for 2018.
2. Prepare the stockholders' equity section of the balance sheet as of December 31, 2018, including the heading. Assume Naxion had net income of $15,000,000 during 2018. This is the first year of operations.
3. Determine Naxion's earnings per share for 2018, rounded to two decimal places. For the average number of common shares outstanding, average the number of shares outstanding on January 2 and December 31.
4. Assuming Naxion's market value per common share as of December 31, 2018, was $55, calculate Naxion's price/earnings ratio for 2018, rounded to two decimal places.

CHAPTER 13

> Continuing Problem

P13-54 Journalizing stock issuances, cash dividends, and stock dividends; preparing stockholders' equity section of balance sheet

This problem continues the Canyon Canoe Company situation from Chapter 12. After looking into debt financing through notes, mortgage, and bonds payable, Canyon Canoe Company decides to raise additional capital for the planned business expansion. The company will be able to acquire cash as well as land adjacent to its current business location. Before the following transactions, the balance in Common Stock on January 1, 2021, was $136,000 and included 136,000 shares of common stock issued and outstanding. (There was no Paid-In Capital in Excess of Par—Common.)

Canyon Canoe Company had the following transactions in 2021:

Jan. 1	Issued 50,000 shares of $1 par value common stock for a total of $200,000.
10	Issued 20,000 shares of 4%, $3 par value preferred stock in exchange for land with a market value of $70,000.
Dec. 15	Declared total cash dividends of $15,000.
20	Declared an 8% common stock dividend when the market value of the stock was $4.50 per share.
31	Paid the cash dividends.
31	Distributed the stock dividend.

Requirements

1. Journalize the transactions.
2. Calculate the balance in Retained Earnings on December 31, 2021. Assume the balance on January 1, 2021 was $4,250 and net income for the year was $417,000.
3. Prepare the stockholders' equity section of the balance sheet as of December 31, 2021. There was no preferred stock issued prior to the 2021 transactions.

COMPREHENSIVE PROBLEM

CHAPTER 13

> Comprehensive Problem for Chapters 11, 12, and 13.

The Tusquittee Company is a retail company that began operations on October 1, 2018, when it incorporated in the state of North Carolina. The Tusquittee Company is authorized to issue 100,000 shares of $1 par value common stock and 50,000 shares of 5%, $50 par value preferred stock. The company sells a product that includes a one-year warranty and records estimated warranty payable each month. Customers are charged a 6% state sales tax. The company uses a perpetual inventory system. There are three employees that are paid a monthly salary on the last day of the month.

Following is the chart of accounts for The Tusquittee Company. As a new business, all beginning balances are $0.

The Tusquittee Company Chart of Accounts	
Cash	Dividends Payable—Common
Merchandise Inventory	Notes Payable
Land	Mortgages Payable
Building	Common Stock—$1 Par Value
Store Fixtures	Paid-In Capital in Excess of Par—Common
Accumulated Depreciation	Paid-In Capital from Treasury Stock Transactions
Accounts Payable	Retained Earnings
Employee Income Taxes Payable	Treasury Stock—Common
FICA—OASDI Taxes Payable	Cash Dividends
FICA—Medicare Taxes Payable	Sales Revenue
Employee Health Insurance Payable	Cost of Goods Sold
Federal Unemployment Taxes Payable	Salaries Expense
State Unemployment Taxes Payable	Payroll Tax Expense
Income Tax Payable	Utilities Expense
Sales Tax Payable	Depreciation Expense
Estimated Warranty Payable	Warranty Expense
Interest Payable	Income Tax Expense
	Interest Expense

The Tusquittee Company completed the following transactions during the last quarter of 2018, its first year of operations:

Oct. 1	Issued 25,000 shares of $1 par value common stock for cash of $10 per share.
1	Issued a $200,000, 10-year, 8% mortgage payable for land with an existing store building. Mortgage payments of $2,425 are due on the first day of each month, beginning November 1. The assets had the following market values: Land, $40,000; Building, $160,000.
1	Issued a one-year, 10% note payable for $10,000 for store fixtures. The principal and interest are due October 1, 2019.
3	Purchased merchandise inventory on account from Top Rate for $125,000, terms n/30.
15	Paid $160 for utilities.
31	Recorded cash sales for the month of $185,000 plus sales tax of 6%. The cost of the goods sold was $110,000 and estimated warranty payable was 8%.
31	Recorded October payroll and paid employees.
31	Accrued employer payroll taxes for October.
Nov. 1	Paid the first mortgage payment.
3	Paid Top Rate for the merchandise inventory purchased on October 3.
10	Purchased merchandise inventory on account from Top Rate for $150,000, terms n/30.
12	Purchased 500 shares of treasury stock for $15 per share.
15	Paid all liabilities associated with the October 31 payroll.
15	Remitted (paid) sales tax from October sales to the state of North Carolina.

16	Paid $6,000 to satisfy warranty claims.
17	Declared cash dividends of $1 per outstanding share of common stock.
18	Paid $245 for utilities.
27	Paid the cash dividends.
30	Recorded cash sales for the month of $140,000 plus sales tax of 6%. The cost of the goods sold was $84,000 and estimated warranty payable was 8%.
30	Recorded November payroll and paid employees.
30	Accrued employer payroll taxes for November.
Dec. 1	Paid the second mortgage payment.
10	Paid Top Rate for the merchandise inventory purchased on November 10.
12	Paid $7,500 to satisfy warranty claims.
15	Sold 300 shares of treasury stock for $20 per share.
15	Paid all liabilities associated with the November 30 payroll.
15	Remitted (paid) sales tax from November sales to the state of North Carolina.
18	Paid $220 for utilities.
19	Purchased merchandise inventory on account from Top Rate for $90,000, terms n/30.
31	Recorded cash sales for the month of $210,000 plus sales tax of 6%. The cost of the goods sold was $126,000 and estimated warranty payable was 8%.
31	Recorded December payroll and paid employees.
31	Accrued employer payroll taxes for December.

Requirements

1. In preparation for recording the transactions, prepare:
   - **a.** An amortization schedule for the first 3 months of the mortgage payable issued on October 1. Round interest calculations to the nearest dollar.
   - **b.** Payroll registers for October, November, and December. All employees worked October 1 through December 31 and are subject to the following FICA taxes: OASDI: 6.2% on first $118,500 earned; Medicare: 1.45% up to $200,000, 2.35% on earnings above $200,000. Additional payroll information includes:

Employee	Monthly Salary	Federal Income Tax	Health Insurance
Kate Jones	$ 6,000	$ 1,800	$ 300
Mary Smith	5,000	1,000	300
Sherry Martin	3,000	450	300

   - **c.** Calculations for employer payroll taxes liabilities for October, November, and December: OASDI: 6.2% on first $118,500 earned; Medicare: 1.45%; SUTA: 5.4% on first $7,000 earned; FUTA: 0.6% on first $7,000 earned.
2. Record the transactions in the general journal. Omit explanations.
3. Post to the general ledger.
4. Record adjusting entries for the three month period ended December 31, 2018:
   - **a.** Depreciation on the Building, straight-line, 40 years, no residual value.
   - **b.** Store Fixtures, straight-line, 20 years, no residual value.
   - **c.** Accrued interest expense on the note payable for the store fixtures.

CHAPTER 13

d. Accrued interest expense on the mortgage payable.
e. Accrued income tax expense of $36,000.

5. Post adjusting entries and prepare an adjusted trial balance.
6. Prepare a multi-step income statement and statement of retained earnings for the quarter ended December 31, 2018. Prepare a classified balance sheet as of December 31, 2018. Assume that $13,840 of the mortgage payable is due within the next year.
7. Evaluate the company's success for the first quarter of operations by calculating the following ratios. The market price of the common stock is $25 on December 31, 2018. Round to two decimal places.
   a. Times interest earned
   b. Debt to equity
   c. Earnings per share
   d. Price/earnings ratio
   e. Rate of return on common stock
8. The Tusquittee Company wants to expand and is considering options for raising additional cash. The company estimates net income before the expansion of $250,000 in 2019 and that the expansion will provide additional operating income of $75,000 in 2019. The company intends to sell the shares of treasury stock, so use issued shares for the analysis rather than current shares outstanding. Compare these options, assuming a 30% income tax rate:

   Plan 1: Issue 10,000 additional shares of common stock for $20 per share

   Plan 2: Issue $200,000 in 20-year, 12% bonds payable.

   Which option will contribute more net income in 2019? Which option provides the highest EPS?

> Tying It All Together Case 13-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Facebook's 2015 annual report (https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/2015-Annual-Report.pdf).

Facebook, Inc. is a mobile application and Web site that enables people to connect, share, discover, and communicate with each other. The company also owns Instagram, messenger, WhatsApp, and Oculus.

Requirements

1. Review Item 5 (Dividend Policy) of the 2015 annual report. Has Facebook ever paid a dividend? Provide the company's reasoning.
2. Review the balance sheet for Facebook. What is the par value of its Class A common shares?
3. Does Facebook have any treasury stock? How do you know?

> Decision Case 13-1

Lena Kay and Kathy Lauder have a patent on a new line of cosmetics. They need additional capital to market the products, and they plan to incorporate the business. They are considering the capital structure for the corporation. Their primary goal is to raise as much capital as possible without giving up control of the business. Kay and Lauder plan to invest the patent (an intangible asset, which will be transferred

to the company's ownership in lieu of cash) in the company and receive 100,000 shares of the corporation's common stock. They have been offered $100,000 for the patent, which provides an indication of the fair market value of the patent.

The corporation's plans for a charter include an authorization to issue 5,000 shares of preferred stock and 500,000 shares of $1 par common stock. Kay and Lauder are uncertain about the most desirable features for the preferred stock. Prior to incorporating, they are discussing their plans with two investment groups. The corporation can obtain capital from outside investors under either of the following plans:

- **Plan 1.** Group 1 will invest $150,000 to acquire 1,500 shares of 6%, $100 par nonvoting, noncumulative preferred stock.
- **Plan 2.** Group 2 will invest $100,000 to acquire 1,000 shares of $5, no-par preferred stock and $70,000 to acquire 70,000 shares of common stock. Each preferred share receives 50 votes on matters that come before the common stockholders.

Requirements

Assume that the corporation has been chartered (approved) by the state.

1. Journalize the issuance of common stock to Kay and Lauder. Explanations are not required.
2. Journalize the issuance of stock to the outsiders under both plans. Explanations are not required.
3. Net income for the first year is $180,000, and total dividends are $30,000. Prepare the stockholders' equity section of the corporation's balance sheet under both plans at the end of the first year.
4. Recommend one of the plans to Kay and Lauder. Give your reasons.

> Financial Statement Case 13-1

Use **Target Corporation's** financial statements to answer the following questions. Visit **http://www.pearsonhighered.com/Horngren** to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. Review the stockholders' equity section of the balance sheet. Did Target have any preferred stock at January 30, 2016?
2. Now examine the notes at the bottom of the balance sheet. Is Target authorized to issue preferred stock? If so, how much?
3. How much of Target Corporation's common stock was outstanding at January 30, 2016? How can you tell?
4. Examine Target Corporation's consolidated statements of cash flows. Did Target pay any cash dividends during the year ending January 30, 2016? If so, how much?
5. Show how Target Corporation computed basic earnings per share of $5.35 for fiscal year 2015. (Ignore diluted earnings per share.)

> Team Project 13-1

Obtain the annual reports (or annual report data) of five well-known companies. You can get the reports either from the companies' Web sites, from your college library, or by mailing a request directly to the company (allow two weeks for delivery). Or you can go online and search the SEC EDGAR database (**http://www.sec.gov/edgar.shtml**), which includes the financial reports of most well-known companies.

Requirements

1. After selecting five companies, examine their income statements to search for the following items:
   a. Net income or net loss
   b. Earnings per share data
2. Study the companies' balance sheets to answer the following questions:
   a. What classes of stock has each company issued?
   b. Which item carries a larger balance—the Common Stock account or Paid-In Capital in Excess of Par (also labeled Additional Paid-In Capital)?
   c. What percentage of each company's total stockholders' equity is made up of retained earnings?
   d. Do any of the companies have treasury stock? If so, how many shares and how much is the cost?
3. Examine each company's statement of stockholders' equity for evidence of the following:
   a. Cash dividends
   b. Stock dividends
   c. Treasury stock purchases and sales
4. As directed by your instructor, either write a report or present your findings to your class. You may not be able to understand *everything* you find, but neither can the Wall Street analysts! You will be amazed at how much you have learned.

> Communication Activity 13-1

In 75 words or fewer, explain the difference between stock dividends and stock splits. Include the effect on stock values.

MyAccountingLab **For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit http://www.myaccountinglab.com.**

> Quick Check Answers

1. b **2.** d **3.** c **4.** c **5.** d **6.** c **7.** c **8.** b **9.** b **10.** d **11.** c

Chapter 13
Stockholders' Equity

Review Questions

1. A corporation is a business organized under state law that is a separate legal entity.

2. Characteristics of a corporation are the following (students are required to list three):
   a. Is a separate legal entity
   b. Has one or more owners
   c. No personal stockholder liability for the debts of the corporation
   d. Does not allow stockholders to bind the business to a contract
   e. Has an indefinite life
   f. Is a separate taxable entity
   g. Allows for capital accumulation

3. Authorized stock is the maximum number of shares of stock that the corporate charter allows for the corporation to issue. Outstanding stock is issued stock in the hands of the stockholders.

4. The four basic rights of a stockholder are to do the following:
   a. Participate in management by voting on corporate matters.
   b. Receive a proportionate part of any dividend that is declared and paid.
   c. Receive a proportionate share of any assets remaining after the corporation pays its debts and liquidates.
   d. Maintain their proportionate ownership in the corporation (a preemptive right).

5. Preferred stock gives its owners certain advantages over common stock. It receives dividend preference over common stockholders. It also receives assets before common stockholders if the corporation liquidates.

6. Par value is an arbitrary amount assigned by a company to a share of its stock.

7. The two basic sources of stockholders' equity are paid-in capital and retained earnings. Paid-in capital represents amounts received from stockholders in exchange for capital. Common stock is the main source of paid-in capital. Retained earnings is equity earned by profitable operations that is not distributed to stockholders.

8. The account used to record the premium when issuing common stock is the Paid-In Capital in Excess of Par—Common. It is an equity account.

9. The transaction is recorded at the market value of the stock issued or the market value of the assets received, whichever is more clearly determinable.

10. Treasury stock is a corporation's own stock that it has previously issued and later reacquired. Its normal balance is a debit. Treasury stock is a contra-equity account.

11. Treasury stock is reported beneath retained earnings on the balance sheet as a reduction to total stockholders' equity.

12. When cash dividends are declared, a current liability increases (Dividends Payable is credited) and Stockholder's Equity decreases (Cash Dividends is debited).
When cash dividends are paid, there is a decrease in both assets (Cash) and liabilities (Dividends Payable).

13. The three relevant dates involving cash dividends are the declaration date, date of record, and payment date.

a. On the declaration date the board of directors announces the intention to pay the dividend. The declaration of a cash dividend creates an obligation (liability) for the corporation.
b. Date of record is the date the corporation records the names of stockholders that receive dividend checks.
c. Payment of the dividend usually follows the record date by a week or two.

14. With cumulative preferred stock, the owners must receive all dividends in arrears before the corporation pays dividends to the common stockholders. For noncumulative preferred stock, the corporation is not required to pay any passed dividends.

15. A stock dividend is a distribution of a corporation's own stock to its stockholders.

16. When a stock dividend is declared, there is no change to the accounting equation because it does not create a liability. The make-up of stockholders' equity does, however, change. When the dividend is distributed, the accounting equation stays the same, but the stockholder's equity will be rearranged. For a small stock dividend, common stock and paid-in capital in excess of par increase and retained earnings decrease. For a large stock dividend, common stock increases and retained earnings decrease.

17. A company issues stock dividends for several reasons:

a. To continue dividends but conserve cash
b. To reduce the market price per share of its stock
c. To reward investors

18. A stock split is an increase in the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock.

19. Discontinued operations relate to gains, income, or losses from the sale of a segment of a business. The gains, income, or losses are reported net of taxes.

20. The statement of retained earnings reports how the company's retained earnings balance changed from the beginning of the period to the end of the period.

21. A prior-period adjustment is a correction to retained earnings for an error in an earlier period.

22. The statement of stockholders' equity is another option for reporting the changes in stockholders' equity of a corporation. This statement has more information than the statement of retained earnings in that it reports the changes in all stockholders' equity accounts, not just retained earnings.

23. Earnings per share reports the amount of net income (loss) for each share of the company's outstanding common stock. It is calculated by taking net income minus preferred dividends divided by the weighted average number of common shares outstanding.

24. The price/earnings ratio is the ratio of the market price of a share of common stock to the company's earnings per share. It is calculated by taking the market price per share of common stock and dividing it by earnings per share.

25. The rate of return on common stock shows the relationship between net income available to common stockholders and their average common equity invested in the company. It is calculated by taking net income minus preferred dividends and then dividing that number by average common stockholders' equity.

Short Exercises

S13-1
Requirement 1

Stockholders are not personally liable for the debts of the corporation. Other advantages of the corporate entity form include the following. A corporation:

- Does not allow stockholders to bind the business to a contract; lack of mutual agency
- Has an indefinite life
- Can raise more money than sole proprietorships and partnerships
- Makes transfer of ownership easy

Requirement 2

Some disadvantages of organizing as a corporation are:

- Ownership and management are often separated.
- Earnings of the corporation are subject to double taxation.
- Government regulation is expensive.
- Start-up costs are higher than other business forms.

S13-2
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Cash ($6 per share × 4,500 shares)	27,000	
	Common Stock—$3 Par Value ($3 per share × 4,500 shares)		13,500
	Paid-In Capital in Excess of Par—Common ($3 per share × 4,500 shares)		13,500
	Issued common stock at a premium.		

Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Cash	135,000	
	Preferred Stock—$30 Par Value ($30 per share × 4,500 shares)		135,000
	Issued preferred stock at par.		

S13-3

Date	Accounts and Explanation	Debit	Credit
Jan. 13	Cash	10,000	
	Common Stock—No-Par Value ($2 per share × 5,000 shares)		10,000
	Issued no-par common stock.		

S13-4

Date	Accounts and Explanation	Debit	Credit
July 7	Cash ($11 per share × 9,000 shares)	99,000	
	Common Stock—$3 Stated Value ($3 per share × 9,000 shares)		27,000
	Paid-In Capital in Excess of Stated—Common ($8 per share × 9,000 shares)		72,000
	Issued common stock at a premium.		

S13-5

Date	Accounts and Explanation	Debit	Credit
	Building	160,000	
	Common Stock—$1 Par Value ($1 per share × 36,000 shares)		36,000
	Paid-In Capital in Excess of Par—Common ($160,000 – $36,000)		124,000
	Issued common stock in exchange for a building.		

S13-6
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 1	Treasury Stock—Common ($5 per share × 1,900 shares)	9,500	
	Cash		9,500
Dec. 15	Cash ($8 per share × 200 shares)	1,600	
	Treasury Stock—Common ($5 per share × 200 shares)		1,000
	Paid-In Capital from Treasury Stock Transactions ($3 × 200 shares)		600
Dec. 20	Cash ($1 per share × 1,000 shares)	1,000	
	Paid-In Capital from Treasury Stock Transactions	2,400	
	Retained Earnings	1,600	
	Treasury Stock—Common ($5 per share × 1,000 shares)		5,000

Requirement 2

Discount Furniture, Inc. will report treasury stock beneath retained earnings on the balance sheet as a reduction to total stockholders' equity.

S13-7
Requirement 1

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 15	Cash Dividends ($4,800 + $12,500)	17,300	
	Dividends Payable—Preferred (4% × $120,000)		4,800
	Dividends Payable—Common ($0.25 per share × 50,000)		12,500
	Declared cash dividends.		

S13-7, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 4	Dividends Payable—Preferred	4,800	
	Dividends Payable—Common	12,500	
	Cash		17,300
	Payment of cash dividends.		

S13-8
Requirement 1

Total Dividend		$ 44,000
Dividend to Preferred Stockholders	6% × $12 × 7,000 shares	(5,040)
Dividend to Common Stockholders		$ 38,960

Requirement 2

Total Dividend			$ 46,000
Dividend to Preferred Stockholders	6% × $12 × 7,000 shares		
Dividends in Arrears (2016)		$ 5,040	
Dividends in Arrears (2017)		5,040	
Current Year Dividend (2018)		5,040	(15,120)
Dividend to Common Stockholders			$ 30,880

Requirement 3

Total Dividend		$ 46,000
Dividend to Preferred Stockholders (2018)	6% × $12 × 7,000 shares	(5,040)
Dividend to Common Stockholders		$ 40,960

S13-9
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Stock Dividends ($15 per share × 13,000 × 0.05)	9,750	
	Common Stock Dividend Distributable ($1 per share × 13,000 × 0.05)		650
	Paid-In Capital in Excess of Par—Common ($9,750 − $650)		9,100
	Declared a 5% stock dividend.		
Aug. 31	Common Stock Dividend Distributable	650	
	Common Stock—$1 Par Value		650
	Issued 5% stock dividend.		

Requirement 2

The overall effect of the stock dividend on Element's total assets is zero.

Requirement 3

The dividend merely rearranges the balance in the stockholders' equity accounts, leaving total stockholders' equity unchanged.

S13-10
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Stock Dividends ($2 per share × 320,000 shares × 0.40)	256,000	
	Common Stock Dividend Distributable		256,000
	Declared a 40% stock dividend.		
Dec. 30	Common Stock Dividend Distributable	256,000	
	Common Stock—$2 Par Value		256,00
	Issued 40% stock dividend.		

Requirement 2

Shares before dividend	320,000
New shares from 40% dividend	128,000
Total shares after dividend	448,000

S13-11
Requirement 1

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$0.50 Par Value; 490,000,000 shares authorized, 238,000,000 shares issued and outstanding	$ 119,000,000
Paid-In Capital in Excess of Par—Common	148,000,000
Total Paid-In Capital	267,000,000
Retained Earnings	654,000,000
Total Stockholders' Equity	$ 921,000,000

Requirement 2

The account balances would be unchanged after the stock split.

S13-12

ABC CORPORATION Income Statement Year Ended December 31, 2018	
Net Sales	$ 81,000
Cost of Goods Sold	30,000
Gross Profit	51,000
Operating Expenses	25,000
Operating Income	26,000
Other Income and (Expenses):	(7,200)
Income Before Income Taxes	18,800
Income Tax Expense	7,332
Income from Continuing Operations	11,468
Discontinued Operations (less applicable tax of $1,404)	2,196
Net Income	$ 13,664

S13-13

ABC CORPORATION
Income Statement
Year Ended December 31, 2018

Earnings per Share of Common Stock (8,000 shares outstanding):		
Income from Continuing Operations	($11,468 − $4,000) / 8,000	$ 0.93
Discontinued Operations	$2,196 / 8,000	0.27
Net Income	($13,664 − $4,000) / 8,000	$1.21

S13-14

KINGSTON, INC.
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 135,000
Net income for the year	75,000
	210,000
Dividends Declared	(85,000)
Retained Earnings, December 31, 2018	$ 125,000

S13-15
Requirement 1

In 2018, the error understated assets by $35,000, overstated utilities expense by $35,000 and understated net income by $35,000. In 2018, total stockholders' equity (retained earnings) would be understated $35,000.

Requirement 2

The error would be reported as an adjustment to the beginning balance in the retained earnings account on the Statement of Retained Earnings in 2019; it would be designated as a prior-period adjustment. The prior period adjustment would be an addition of $35,000.

S13-16

Earnings per share	=	(Net income − Preferred dividends)	/	Average number of common shares outstanding
	=	(\$60,450 − \$2,600)	/	(15,500 shares + 20,100 shares) / 2
	=	\$57,850	/	17,800
	=	\$3.25 per share		

S13-17

Price/earnings ratio	=	Market price per share of common stock	/	Earnings per share
	=	\$19.50	/	\$3.25
	=	6.00		

S13-18

Rate of return on common stockholders' equity	=	(Net income − Preferred dividends)	/	Average common stockholders' equity
	=	(\$3,690 − 0)	/	(\$22,500 + \$18,500) / 2
	=	\$3,690	/	\$20,500
	=	0.18 = 18%		

Exercises

E13-19

a. Disadvantage
b. Advantage
c. Advantage
d. Advantage
e. Disadvantage
f. Advantage
g. Disadvantage

E13-20

Patent for Common Stock		$ 57,000
Cash for Preferred Stock	6,000 shares × $10 par	60,000
Cash for no-par Common Stock	6,500 shares × $20 per share	130,000
Total paid-in capital		$ 247,000

E13-21
Requirement 1

Date	Accounts and Explanation	Debit	Credit
May 19	Cash ($10.50 per share × 1,700 shares)	17,850	
	Common Stock—$3 Par Value ($3 per share × 1,700 shares)		5,100
	Paid-In Capital in Excess of Par—Common ($17,850 − $5,100)		12,750
Jun. 3	Cash	15,000	
	Preferred Stock		15,000
11	Equipment	68,000	
	Common Stock—$3 Par Value ($3 per share × 5,000 shares)		15,000
	Paid-In Capital in Excess of Par—Common ($68,000 − $15,000)		53,000

Requirement 2

Cash for Common Stock	$ 17,850
Cash for Preferred Stock	15,000
Equipment for Common Stock	68,000
Total paid-in capital	$ 100,850

E13-22
Requirement 1

Date	Accounts and Explanation	Debit	Credit
a.	Cash ($13 per share × 8,000 shares)	104,000	
	Common Stock		104,000
	Issued no-par stock.		
b.	Cash ($13 per share × 8,000 shares)	104,000	
	Common Stock—$3 Stated Value ($3 per share × 8,000 shares)		24,000
	Paid-In Capital in Excess of Stated—Common ($104,000 − $24,000)		80,000
	Issued $3 stated value common stock.		

Requirement 2

Both types of stock result in the same paid-in capital balance.

E13-23
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Sep. 6	Cash	16,500	
	Common Stock—$1 Par Value ($1 per share × 550 shares)		550
	Paid-In Capital in Excess of Par—Common ($16,500 – $550)		15,950
	Issued common stock for cash.		
12	Cash	23,000	
	Preferred Stock		23,000
	Issued preferred stock for cash.		
14	Land	17,000	
	Common Stock—$1 Par Value ($1 per share × 1,500 shares)		1,500
	Paid-In Capital in Excess of Par—Common ($17,000 − $1,500)		15,500
	Issued common stock for land.		

E13-23, cont.
Requirement 2

ASAP-TV, Inc. Balance Sheet (Partial) September 30, 2018	
Stockholders' Equity	
Paid-In Capital:	
Preferred Stock, $5, no-par; 100,000 shares authorized, 400 shares issued and outstanding	$ 23,000
Common Stock—$1 Par Value; 500,000 shares authorized, 2,050 shares issued and outstanding	2,050
Paid-In Capital in Excess of Par—Common	31,450
Total Paid-In Capital	56,500
Retained Earnings	38,000
Total Stockholders' Equity	$ 94,500

E13-24
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Mar. 23	Cash ($15 per share × 230 shares)	3,450	
	Common Stock—$3 Par Value ($3 per share × 230 shares)		690
	Paid-In Capital in Excess of Par—Common ($3,450 – $690)		2,760
	Issued common stock for cash.		
Apr. 12	Inventory	27,000	
	Equipment	19,000	
	Common Stock—$3 Par Value ($3 per share × 320 shares)		960
	Paid-In Capital in Excess of Par—Common ($27,000 + $19,000 − $960)		45,040
	Issued common stock for inventory and equipment.		
17	Cash ($20 per share × 900 shares)	18,000	
	Preferred Stock—$20 Par Value		18,000
	Issued preferred stock for cash.		

Requirement 2

EVERGREEN CORPORATION
Balance Sheet (Partial)
April 30, 2018

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock, 5%, $20 par value; 900 shares authorized, issued and outstanding	$ 18,000
Common Stock—$3 Par Value; 1,400 shares authorized, 550 shares issued and outstanding	1,650
Paid-In Capital in Excess of Par—Common	47,800
Total Paid-In Capital	67,450
Retained Earnings	73,000
Total Stockholders' Equity	$ 140,450

E13-25
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Dec. 30	Treasury Stock—Common ($15 per share × 200 shares)	3,000	
	Cash		3,000
	Purchased treasury stock.		

Requirement 2

SOUTHERN AMUSEMENTS CORPORATION
Balance Sheet (Partial)
December 31, 2018

Stockholders' Equity	
Paid-In Capital:	
Common Stock, $5 Par Value; 1,300 shares authorized, 250 shares issued, 50 shares outstanding	$ 1,250
Paid-In Capital in Excess of Par—Common	3,750
Total Paid-In Capital	5,000
Retained Earnings	50,000
Treasury Stock—Common; 200 shares at cost	(3,000)
Total Stockholders' Equity	$ 52,000

Requirement 3

There are 50 shares outstanding after the purchase of the treasury stock (250 shares − 200 shares).

E13-26

Date	Accounts and Explanation	Debit	Credit
Mar. 4	Cash ($10 per share × 27,000 shares)	270,000	
	Common Stock ($1 per share × 27,000 shares)		27,000
	Paid-In Capital in Excess of Par—Common ($270,000 − $27,000)		243,000
	Issued common stock for cash.		
May 22	Treasury Stock—Common ($13 per share × 1,300 shares)	16,900	
	Cash		16,900
	Purchased treasury stock.		
Sep. 22	Cash ($23 per share × 500 shares)	11,500	
	Treasury Stock—Common ($13 cost per share × 500 shares)		6,500
	Paid-In Capital from Treasury Stock Transactions ($10 × 500 shares)		5,000
	Sold treasury stock with cost of $13 per share.		
Oct. 14	Cash ($9 per share × 800 shares)	7,200	
	Paid-In Capital from Treasury Stock Transactions ($4 × 800 shares)	3,200	
	Treasury Stock—Common ($13 cost per share × 800 shares)		10,400
	Sold treasury stock with cost of $13 per share.		

E13-27
Requirement 1

Total Dividend—2018			$ 9,000
Dividend to Preferred Stockholders	5% × $11 × 20,000 shares	$ 11,000*	
Current Year Dividend (2018)			(9,000)
Dividend to Common Stockholders			$ 0

*Preferred dividends are limited to $9,000, the amount of dividends declared.

Total Dividend—2019			$ 45,000
Dividend to Preferred Stockholders	5% × $11 × 20,000 shares		
Dividends in Arrears (2018)	$11,000 – $9,000	$ 2,000	
Current Year Dividend (2019)		11,000	(13,000)
Dividend to Common Stockholders			$ 32,000

E13-27, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 1	Cash Dividends	9,000	
	Dividends Payable—Preferred		9,000
	Declared a cash dividend.		
20	Dividends Payable—Preferred	9,000	
	Cash		9,000
	Payment of cash dividend.		

E13-28
Requirement 1

Total Dividend—2018			$ 185,000
Dividend to Preferred Stockholders	4% × $2 × 55,000 shares	$ 4,400	
Current Year Dividend (2018)			(4,400)
Dividend to Common Stockholders			$ 180,600

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
July 1	Cash Dividends	185,000	
	Dividends Payable—Preferred		4,400
	Dividends Payable—Common		180,600
	Declared a cash dividend.		
31	Dividends Payable—Preferred	4,400	
	Dividends Payable—Common	180,600	
	Cash		185,000
	Payment of cash dividend.		

E13-29
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Apr. 30	Stock Dividends ($16 per share × 400 shares × 0.13)	832	
	Common Stock Dividend Distributable ($1 per share × 400 shares × 0.13)		52
	Paid-In Capital in Excess of Par—Common ($832 − $52)		780
	Declared a 13% stock dividend.		
May 15	Common Stock Dividend Distributable	52	
	Common Stock—$1 Par Value		52
	Issued 13% stock dividend.		

Requirement 2

LAKESIDE OCCUPATIONAL THERAPY, INC.
Balance Sheet (Partial)
May 31, 2018

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$1 Par Value; 1,200 shares authorized, 452 shares issued and outstanding	$ 452
Paid-In Capital in Excess of Par—Common	2,380
Total Paid-In Capital	2,832
Retained Earnings	119,168
Total Stockholders' Equity	$ 122,000

E13-30
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Stock Dividends ($7 per share × 73,000 shares × 0.14)	71,540	
	Common Stock Dividend Distributable ($2 per share × 73,000 shares × 0.14)		20,440
	Paid-In Capital in Excess of Par—Common ($71,540 − $20,440)		51,100
	Declared a 14% stock dividend.		
	Common Stock Dividend Distributable	20,440	
	Common Stock—$2 Par Value		20,440
	Issued 14% stock dividend.		

E13-30, cont.
Requirement 2

Date	Accounts and Explanation	Debit	Credit
	Cash Dividends ($0.70 × (73,000 shares + 10,220 shares))	58,254	
	Dividends Payable—Common		58,254
	Declared a cash dividend.		
	Dividends Payable—Common	58,254	
	Cash		58,254
	Payment of cash dividend.		

E13-31

WOOD GOLF CLUB CORP.
Balance Sheet (Partial)
June 30, 2018

Stockholders' Equity	
Paid-In Capital:	
Common Stock—$0.50 Par Value; 650 shares authorized, 540 shares issued and outstanding	$ 270
Paid-In Capital in Excess of Par—Common	540
Total Paid-In Capital	810
Retained Earnings	2,600
Total Stockholders' Equity	$ 3,410

E13-32

	Cash dividend	Stock dividend	Stock split
Decreases retained earnings	√	√	
Has no effect on a liability	√	√	√
Increases paid-in capital by the same amount that it decreases retained earnings		√	
Decreases both total assets and total stockholders' equity	√		
Has no effect on total stockholders' equity		√	√

E13-33

	Effect on Total Stockholders' Equity	Amount	Explanation
a.	No effect	$ 0	Increases Paid-In Capital, but decreases Retained Earnings
b.	No effect	0	No change to any accounts
c.	Decrease	6,600	Increases Treasury Stock, which decreases equity 1,100 shares × $6 per share
d.	Increase	5,400	Decreases Treasury Stock, which increases equity 600 shares × $9 per share

E13-34

CLIX PHOTOGRAPHIC SUPPLIES, INC.
Income Statement
Year Ended December 31, 2018

Net Sales	$ 525,000
Cost of Goods Sold	240,000
Gross Profit	285,000
Operating Expenses (Including Income Tax)	100,000
Income from Continuing Operations	185,000
Discontinued Operations (less applicable tax of $12,000)	(18,000)
Net Income	$ 167,000

E13-35

		Common Shares Outstanding	
Earnings per Share of Common Stock:			
Income from Continuing Operations	\$711,000 – \$27,000* = \$684,000	/ 60,000	\$ 11.40
Discontinued Operations	(\$36,000)	/ 60,000	(0.60)
Net Income	\$711,000 – \$36,000 – \$27,000 = \$648,000	/ 60,000	\$ 10.80

*Preferred Dividends 9,000 shares × \$15 × 20% = \$27,000

E13-36

KELLY MAY BAKERY, INC.
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018, as originally reported	\$ 48,000
Prior Period Adjustment	(1,000)
Retained Earnings, January 1, 2018, as adjusted	47,000
Net income for the year	74,000
	121,000
Dividends Declared	(28,000)
Retained Earnings, December 31, 2018	\$ 93,000

E13-37
Requirement 1

Earnings per share	=	(Net income − Preferred dividends)	/	Average number of common shares outstanding
	=	($153,040 – (6% × $60 × 1,000 shares)	/	46,700
		($153,040 – $3,600)		46,700
	=	$149,440	/	46,700
	=	$3.20 per share		

Requirement 2

Price/earnings ratio	=	Market price per share of common stock	/	Earnings per share
	=	$12	/	$3.20
	=	3.75		

E13-38

Rate of return on common stockholders' equity	=	(Net income − Preferred dividends)	/	Average common stockholders' equity = Total equity – preferred equity
	=	($14,800 − 0)	/	(($191,100 – $2,100) + ($177,100 − $2,100)) / 2
	=	$14,800	/	($189,000 + $175,000) / 2
	=	$14,800	/	$182,000
	=	0.08 = 8%		

Problems – Group A

P13-39A
Requirement 1

Students' answers may vary. The following are advantages of the corporate form of business. A corporation:

a. Does not hold individual stockholders personally liable for the debts of the corporation
b. Does not allow stockholders to bind the business to a contract; no mutual agency
c. Has an indefinite life
d. Allows for capital accumulation; can raise more money than sole proprietorships and partnerships
e. Makes transfer of ownership easy

Requirement 2

The recommendation would be to issue common stock, because dividends normally must be paid on preferred stock.

Requirement 3

They need to issue 137,500 shares (cash needed $2,750,000 / market price $20 per share).

P13-40A
Requirement 1

Voyage Comfort Specialists has preferred stock and common stock outstanding.

Requirement 2

The par value of the preferred stock is $5 per share (Balance $1,400,000 / 280,000 shares issued and outstanding = $5 per share)

P13-40A, cont.
Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Cash	1,400,000	
	Preferred Stock—$5 Par Value		1,400,000
	Cash	4,240,000	
	Common Stock—$1 Par Value		1,340,000
	Paid-In Capital in Excess of Par—Common		2,900,000

Requirement 4

Total Dividend—2018			$ 500,000
Dividend to Preferred Stockholders	7% × $5 × 280,000 shares	$ 98,000	
Current Year Dividend (2018)			(98,000)
Dividend to Common Stockholders			$ 402,000

Date	Accounts and Explanation	Debit	Credit
2018			
June 30	Cash Dividends	500,000	
	Dividends Payable—Preferred		98,000
	Dividends Payable—Common		402,000
July 20	Dividends Payable—Preferred	98,000	
	Dividends Payable—Common	402,000	
	Cash		500,000

P13-41A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 2	Building	240,000	
	Common Stock—$4 Par Value ($4 per share × 19,000 shares)		76,000
	Paid-In Capital in Excess of Par—Common ($240,000 – $76,000)		164,000
	Issued common stock for building		
6	Cash ($140 per share × 600 shares)	84,000	
	Preferred Stock—$50 Par Value ($50 per share × 600 shares)		30,000
	Paid-In Capital in Excess of Par—Preferred ($84,000 − $30,000)		54,000
	Issued preferred stock for cash		
9	Cash	55,000	
	Common Stock—$4 Par Value ($4 per share × 11,000 shares)		44,000
	Paid-In Capital in Excess of Par—Common ($55,000 – $44,000)		11,000
	Issued common stock for cash		
10	Cash Dividends	19,000	
	Dividends Payable—Preferred		2,400
	Dividends Payable—Common		16,600
	*Declared cash dividend.**		
25	Dividends Payable—Preferred	2,400	
	Dividends Payable—Common	16,600	
	Cash		19,000
	Paid cash dividend.		

*Total Dividend			$ 19,000
Dividend to Preferred Stockholders	8% × $50 × 600 shares	$ 2,400	
Current Year Dividend			(2,400)
Dividend to Common Stockholders			$ 16,600

P13-41A, cont.
Requirement 2

D-MOBILE WIRELESS Balance Sheet (Partial) October 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Cumulative Preferred Stock—8%, $50 Par Value; 50,000 shares authorized, 600 shares issued and outstanding	$ 30,000
Paid-In Capital in Excess of Par—Preferred	54,000
Common Stock—$4 Par Value; 160,000 shares authorized, 30,000 shares issued and outstanding	120,000
Paid-In Capital in Excess of Par—Common	175,000
Total Paid-In Capital	379,000
Retained Earnings*	75,000
Total Stockholders' Equity	$ 454,000

*Retained Earnings = Beginning Balance + Net income – Dividends = $0 + $94,000 – $19,000 = $75,000

P13-42A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 16	Cash Dividends	26,489	
	Dividends Payable—Preferred (6% × $103 × 1,050 shares)		6,489
	Dividends Payable—Common ($0.20 × 100,000 shares)		20,000
	Declared cash dividend.		
Feb. 15	Dividends Payable—Preferred	6,489	
	Dividends Payable—Common	20,000	
	Cash		26,489
	Paid cash dividend.		
Jun. 10	No entry		
Jul. 30	Stock Dividends ($1 per share × 200,000 shares × 0.30)	60,000	
	Common Stock Dividend Distributable		60,000
	Declared a 30% stock dividend.		
Aug. 15	Common Stock Dividend Distributable	60,000	
	Common Stock—$1 Par Value		60,000
	Issued 30% stock dividend.		
Oct. 26	Treasury Stock—Common ($8 per share × 1,000 shares)	8,000	
	Cash		8,000
	Purchased treasury stock.		
Nov. 8	Cash ($10 per share × 500 shares)	5,000	
	Treasury Stock—Common ($8 cost per share × 500 shares)		4,000
	Paid-In Capital from Treasury Stock Transactions ($2 × 500 shares)		1,000
	Sold treasury stock with cost of $8 per share.		
30	Cash ($4 per share × 300 shares)	1,200	
	Paid-In Capital from Treasury Stock Transactions	1,000	
	Retained Earnings ($2,400 – $1,200 – $1,000)	200	
	Treasury Stock—Common ($8 cost per share × 300 shares)		2,400
	Sold treasury stock with cost of $8 per share.		

P13-42A, cont.
Requirement 2

DEERBORN MANUFACTURING CO. Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Noncumulative Preferred Stock—6%, $103 Par Value; 2,600 shares authorized, 1,050 shares issued and outstanding	$ 108,150
Common Stock—$1 Par Value; 400,000 shares authorized, 260,000 shares issued and 259,800 outstanding	260,000
Total Paid-In Capital	368,150
Retained Earnings	2,060,000
Treasury Stock (200 shares at cost)	(1,600)
Total Stockholders' Equity	$ 2,426,550

Jan. 16	Shares of Common Stock	100,000
Jun. 10	Shares after stock split	200,000
Aug. 15	Shares after stock dividend—30%	260,000

P13-43A

CHUA MOTORSPORTS, INC.
Income Statement
Year Ended November 30, 2018

Net Sales Revenue		$ 819,000
Cost of Goods Sold		510,000
Gross Profit		309,000
Operating Expenses:		
Selling Expenses	$ 110,000	
Administrative Expenses	115,000	225,000
Operating Income		84,000
Other Income and (Expenses):		0
Income Before Income Taxes		84,000
Income Tax Expense		20,000
Income from Continuing Operations		64,000
Discontinued Operations (less applicable tax of $1,000)		1,500
Net Income		$ 65,500
Earnings per Share of Common Stock (5,000 shares outstanding):		
Income from Continuing Operations		$ 3.00
Income from Discontinued Operations		0.30
Net Income		$ 3.30

		Common Shares Outstanding	
Earnings per Share of Common Stock:			
Income from Continuing Operations	$64,000 − $49,000 = $15,000	/ 5,000	$ 3.00
Income from Discontinued Operations	$ 1,500	/ 5,000	0.30
Net Income	$65,500 − $49,000 = $16,500	/ 5,000	$ 3.30

Common stock outstanding = Issued – Treasury = 10,000 shares – 5,000 shares = 5,000 shares
Preferred Dividends= 7,000 shares × $7 = $49,000

P13-44A
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Feb. 6	Stock Dividends ($25 per share × 32,000 × 0.15)	120,000	
	Common Stock Dividend Distributable ($10 per share × 32,000 × 0.15)		48,000
	Paid-In Capital in Excess of Par—Common ($120,000 − $48,000)		72,000
	Declared a 15% stock dividend.		
15	Common Stock Dividend Distributable	48,000	
	Common Stock—$10 Par Value		48,000
	Issued 15% stock dividend.		
Jul. 29	Treasury Stock—Common ($25 per share × 2,300 shares)	57,500	
	Cash		57,500
	Purchased treasury stock.		
Nov. 27	Cash Dividends	3,450	
	Dividends Payable—Common ($0.10 × (32,000 shares + 4,800 shares from dividend less treasury stock 2,300 shares))		3,450
	Declared cash dividend.		

Requirement 2

GOLDSTEIN MANAGEMENT CONSULTING, INC.
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$160,000
Net income for the year	90,000
	250,000
Stock Dividends Declared	(120,000)
Cash Dividends Declared	(3,450)
Retained Earnings, December 31, 2018	$ 126,550

P13-44A, cont.
Requirement 3

GOLDSTEIN MANAGEMENT CONSULTING, INC. Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—$10 Par Value; 350,000 shares authorized, 36,800 shares issued, 34,500 shares outstanding	$ 368,000
Paid-In Capital in Excess of Par—Common	402,000
Total Paid-In Capital	770,000
Retained Earnings	126,550
Treasury Stock (2,300 shares at cost)	(57,500)
Total Stockholders' Equity	$ 839,050

P13-45A
Requirement 1

Earnings per share	=	(Net income − Preferred dividends)	/	Average number of common shares outstanding
	=	($34,380 – (11% × $9 × 12,000 shares)	/	(50,000 + 50,000) / 2
		($34,380 – $11,880)		50,000
	=	$22,500	/	50,000
	=	$0.45 per share		

Requirement 2

Price/earnings ratio	=	Market price per share of common stock	/	Earnings per share
	=	$9	/	$0.45
	=	20.00		

P13-45A, cont.
Requirement 3

Rate of return on common stockholders' equity	=	(Net income − Preferred dividends)	/	Average common stockholders' equity = Total equity minus preferred equity
	=	(\$34,380 – (11% × \$9 × 12,000 shares)	/	((\$282,500 – \$108,000) + (\$260,000 − \$108,000)) / 2
	=	(\$34,380 – \$11,880)		(\$174,500 + \$152,000) / 2
	=	\$22,500	/	\$163,250
	=	14%		

Problems – Group B

P13-46B
Requirement 1

Students' answers may vary. The following are advantages of the corporate form of business. A corporation:

a. Does not hold stockholders personally liable for the debts of the corporation
b. Does not allow stockholders to bind the business to a contract; no mutual agency
c. Has an indefinite life
d. Allows capital accumulation; can raise more money than sole proprietorships and partnerships
e. Makes transfer of ownership easy

Requirement 2

The recommendation would be to issue common stock, because dividends normally must be paid on preferred stock.

Requirement 3

They need to issue 40,000 shares (cash needed $3,000,000 / market price $75 per share).

P13-47B
Requirement 1

Tillman Comfort Specialists has preferred stock and common stock outstanding.

Requirement 2

The par value of the preferred stock is $4 per share (Balance $1,300,000 / 325,000 shares issued and outstanding = $4 per share)

Requirement 3

Date	Accounts and Explanation	Debit	Credit
	Cash	1,300,000	
	Preferred Stock—$4 Par Value		1,300,000
	Cash	3,950,000	
	Common Stock—$1 Par Value		1,350,000
	Paid-In Capital in Excess of Par—Common		2,600,000

Requirement 4

Total Dividend—2018			$ 200,000
Dividend to Preferred Stockholders	5% × $4 × 325,000 shares	$ 65,000	
Current Year Dividend (2018)			(65,000)
Dividend to Common Stockholders			$ 135,000

Date	Accounts and Explanation	Debit	Credit
2018			
June 30	Cash Dividends	200,000	
	Dividends Payable—Preferred		65,000
	Dividends Payable—Common		135,000
July 20	Dividends Payable—Preferred	65,000	
	Dividends Payable—Common	135,000	
	Cash		200,000

P13-48B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Oct. 2	Building	260,000	
	Common Stock—$3 Par Value ($3 per share × 18,000 shares)		54,000
	Paid-In Capital in Excess of Par—Common ($260,000 − $54,000)		206,000
	Issued common stock for building.		
6	Cash ($160 per share × 650 shares)	104,000	
	Preferred Stock—$150 Par Value ($150 per share × 650 shares)		97,500
	Paid-In Capital in Excess of Par—Preferred ($104,000 − $97,500)		6,500
	Issued preferred stock for cash.		
9	Cash	84,000	
	Common Stock—$3 Par Value ($3 per share × 14,000 shares)		42,000
	Paid-In Capital in Excess of Par—Common ($84,000 − $42,000)		42,000
	Issued common stock for cash.		
10	Cash Dividends	13,000	
	Dividends Payable—Preferred		8,775
	Dividends Payable—Common		4,225
	*Declared cash dividend.**		
25	Dividends Payable—Preferred	8,775	
	Dividends Payable—Common	4,225	
	Cash		13,000
	Paid cash dividend.		

*Total Dividend			$ 13,000
Dividend to Preferred Stockholders	9% × $150 × 650 shares	$ 8,775	
Current Year Dividend			(8,775)
Dividend to Common Stockholders			$ 4,225

P13-48B, cont.
Requirement 2

C-MOBILE WIRELESS Balance Sheet (Partial) October 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Cumulative Preferred Stock—9%, $150 Par Value; 120,000 shares authorized, 650 shares issued and outstanding	$ 97,500
Paid-In Capital in Excess of Par—Preferred	6,500
Common Stock—$3 Par Value; 140,000 shares authorized, 32,000 shares issued and outstanding	96,000
Paid-In Capital in Excess of Par—Common	248,000
Total Paid-In Capital	448,000
Retained Earnings*	82,000
Total Stockholders' Equity	$ 530,000

*Ending retained earnings = Beginning retained earnings + Net income – dividends = $0 + $95,000 – $13,000 = $82,000

P13-49B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 16	Cash Dividends	22,693	
	Dividends Payable—Preferred (6% × \$97 × 1,150 shares)		6,693
	Dividends Payable—Common (\$0.20 × 80,000 shares)		16,000
	Declared cash dividend.		
Feb. 15	Dividends Payable—Preferred	6,693	
	Dividends Payable—Common	16,000	
	Cash		22,693
	Paid cash dividend.		
Jun. 10	No entry		
Jul. 30	Stock Dividends (\$4 per share × 160,000 shares × 0.40)	256,000	
	Common Stock Dividend Distributable		256,000
	Declared a 40% stock dividend.		
Aug. 15	Common Stock Dividend Distributable	256,000	
	Common Stock—\$4 Par Value		256,000
	Issued 40% stock dividend.		
Oct. 26	Treasury Stock—Common (\$9 per share × 8,000 shares)	72,000	
	Cash		72,000
	Purchased treasury stock.		
Nov. 8	Cash (\$10 per share × 4,000 shares)	40,000	
	Treasury Stock—Common (\$9 cost per share × 4,000 shares)		36,000
	Paid-In Capital from Treasury Stock Transactions (\$1 × 4,000 shares)		4,000
	Sold treasury stock with cost of \$9 per share.		
30	Cash (\$5 per share × 1,400 shares)	7,000	
	Paid-In Capital from Treasury Stock Transactions	4,000	
	Retained Earnings (\$12,600 – \$7,000 – \$4,000)	1,600	
	Treasury Stock—Common (\$9 cost per share × 1,400 shares)		12,600
	Sold treasury stock with cost of \$9 per share.		

P13-49B, cont.
Requirement 2

HALBORN MANUFACTURING CO.	
Balance Sheet (Partial)	
December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Noncumulative Preferred Stock—6%, $97 Par Value; 2,200 shares authorized, 1,150 shares issued and outstanding	$ 111,550
Common Stock—$4 Par Value; 500,000 shares authorized, 224,000 shares issued and 221,400 outstanding	896,000
Total Paid-In Capital	1,007,550
Retained Earnings	2,030,000
Treasury Stock (2,600 shares at cost)	(23,400)
Total Stockholders' Equity	$ 3,014,150

Jan. 16	Shares of Common Stock	80,000
Jun. 10	Shares after stock split	160,000
Aug. 15	Shares after stock dividend—40%	224,000

P13-50B

ARIZONA MOTORSPORTS, INC. Income Statement Year Ended November 30, 2018		
Net Sales Revenue		$ 801,400
Cost of Goods Sold		470,000
Gross Profit		331,400
Operating Expenses:		
Selling Expenses	$ 95,000	
Administrative Expenses	150,000	245,000
Operating Income		86,400
Other Income and (Expenses):		0
Income Before Income Taxes		86,400
Income Tax Expense		50,000
Income from Continuing Operations		36,400
Discontinued Operations (less applicable tax of $960)		1,440
Net Income		$ 37,840
Earnings per Share of Common Stock (12,000 shares outstanding):		
Income from Continuing Operations		$ 2.70
Income from Discontinued Operations		0.12
Net Income		$ 2.82

		Common Shares Outstanding	
Earnings per Share of Common Stock:			
Income from Continuing Operations	$36,400 − $4,000 = $32,400	/ 12,000	$ 2.70
Income from Discontinued Operations	$ 1,440	/ 12,000	0.12
Net Income	$37,840 − $4,000 = $33,840	/ 12,000	$ 2.82

Common stock outstanding = Issued – Treasury = 13,500 shares – 1,500 shares = 12,000 shares
Preferred Dividends= 2,000 shares × $2 = $4,000

P13-51B
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Feb. 6	Stock Dividends ($25 per share × 22,000 × 0.05)	27,500	
	Common Stock Dividend Distributable ($10 per share × 22,000 × 0.05)		11,000
	Paid-In Capital in Excess of Par—Common ($27,500 − $11,000)		16,500
	Declared a 5% stock dividend.		
15	Common Stock Dividend Distributable	11,000	
	Common Stock—$10 Par Value		11,000
	Issued 5% stock dividend.		
Jul. 29	Treasury Stock—Common ($25 per share × 2,000 shares)	50,000	
	Cash		50,000
	Purchased treasury stock.		
Nov. 27	Cash Dividends	4,220	
	Dividends Payable—Common ($0.20 × (22,000 shares + 1,100 shares from dividend less treasury stock 2,000 shares))		4,220
	Declared cash dividend.		

Requirement 2

CULLINS MANAGEMENT CONSULTING, INC.
Statement of Retained Earnings
Year Ended December 31, 2018

Retained Earnings, January 1, 2018	$ 163,000
Net income for the year	87,000
	250,000
Stock Dividends Declared	(27,500)
Cash Dividends Declared	(4,220)
Retained Earnings, December 31, 2018	$ 218,280

P13-51B, cont.
Requirement 3

CULLINS MANAGEMENT CONSULTING, INC. Balance Sheet (Partial) December 31, 2018	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—$10 Par Value; 200,000 shares authorized,	
23,100 shares issued, 21,100 shares outstanding	$ 231,000
Paid-In Capital in Excess of Par—Common	376,500
Total Paid-In Capital	607,500
Retained Earnings	218,280
Treasury Stock	(50,000)
Total Stockholders' Equity	$ 775,780

P13-52B
Requirement 1

Earnings per share	=	(Net income − Preferred dividends)	/	Average number of common shares outstanding
	=	($18,900 – (11% × $9 × 10,000 shares)	/	(30,000 + 30,000) / 2
		($18,900 – $9,900)		30,000
	=	$9,000	/	30,000
	=	$0.30 per share		

Requirement 2

Price/earnings ratio	=	Market price per share of common stock	/	Earnings per share
	=	$9	/	$0.30
	=	30.00		

P13-52B, cont.
Requirement 3

Rate of return on common stockholders' equity	=	(Net income − Preferred dividends)	/	Average common stockholders' equity – Total equity minus preferred equity
	=	($18,900 – (11% × $9 × 10,000 shares)	/	(($185,000 – $90,000) + ($176,000 − $90,000)) / 2
	=	($18,900 – $9,900)		($95,000 + $86,000) / 2
	=	$9,000	/	$90,500
	=	10%		

Using Excel

P13-53

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P13-54
Requirement 1

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash	200,000	
	Common Stock—$1 Par Value ($1 per share × 50,000 shares)		50,000
	Paid-In Capital in Excess of Par—Common ($200,000 − $50,000)		150,000
	Issued common stock for cash.		
10	Land	70,000	
	Preferred Stock—$3 Par Value ($3 per share × 20,000 shares)		60,000
	Paid-In Capital in Excess of Par—Preferred ($70,000 − $60,000)		10,000
	Issued preferred stock for land.		
Dec. 15	Cash Dividends	15,000	
	Dividends Payable—Preferred (20,000 shares × $3 per share × 4%)		2,400
	Dividends Payable—Common ($15,000 − $2,400)		12,600
	Declared cash dividends.		
20	Stock Dividends ($4.50 per share × 186,000 shares × 0.08)	66,960	
	Common Stock Dividend Distributable ($1 per share × 186,000 shares × 0.08)		14,880
	Paid-In Capital in Excess of Par—Common ($66,960 − $14,880)		52,080
	Declared 8% common stock dividend.		
31	Dividends Payable—Preferred	2,400	
	Dividends Payable—Common	12,600	
	Cash		15,000
	Paid cash dividends.		
31	Common Stock Dividend Distributable	14,880	
	Common Stock—$1 Par Value		14,880
	Distributed common stock dividend.		

P13-54, cont.
Requirement 2

Retained Earnings, January 1, 2021	$ 4,250
Net income for the year	417,000
	421,250
Cash dividends declared	(15,000)
Stock dividends declared	(66,960)
Retained Earnings, December 31, 2021	$ 339,290

Requirement 3

CANYON CANOE COMPANY
Balance Sheet (Partial)
December 31, 2021

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock, 4%, $3 par value; 20,000 shares issued and outstanding	$ 60,000
Paid-In Capital in Excess of Par—Preferred	10,000
Common Stock—$1 Par Value; 200,880 shares issued and outstanding	200,880
Paid-In Capital in Excess of Par—Common	202,080
Total Paid-In Capital	472,960
Retained Earnings	339,290
Total Stockholders' Equity	$ 812,250

Comprehensive Problem for Chapters 11, 12, and 13

Requirement 1

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
10/01/2018					$ 200,000
11/01/2018	$ 200,000	$ 1,092	$ 1,333	$ 2,425	198,908
12/01/2018	198,908	1,099	1,326	2,425	197,809
01/01/2019	197,809	1,106	1,319	2,425	196,703

OCTOBER Payroll

	Earnings			Withholdings					
Employee	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	Total Withholdings	Net Pay
Jones	$ 0.00	$ 6,000.00	$ 6,000.00	$ 372.00	$ 87.00	$ 1,800.00	$ 300.00	$ 2,559.00	$ 3,441.00
Smith	0.00	5,000.00	5,000.00	310.00	72.50	1,000.00	300.00	1,682.50	3,317.50
Martin	0.00	3,000.00	3,000.00	186.00	43.50	450.00	300.00	979.50	2,020.50
	$ 0.00	$ 14,000.00	$ 14,000.00	$ 868.00	$ 203.00	$ 3,250.00	$ 900.00	$ 5,221.00	$ 8,779.00

OCTOBER Employer Payroll Taxes

Tax	Earnings	Rate	Amount
OASDI	$ 14,000.00	6.20%	$ 868.00
Medicare	14,000.00	1.45%	203.00
SUTA	14,000.00	5.40%	756.00
FUTA	14,000.00	0.60%	84.00
			$ 1,911.00

Comprehensive Problem, cont.
Requirement 1, cont.

NOVEMBER Payroll

Employee	Earnings			Withholdings					Net Pay
	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	Total Withholdings	
Jones	$ 6,000.00	$ 6,000.00	$ 12,000.00	$ 372.00	$ 87.00	$ 1,800.00	$ 300.00	$ 2,559.00	$ 3,441.00
Smith	5,000.00	5,000.00	10,000.00	310.00	72.50	1,000.00	300.00	1,682.50	3,317.50
Martin	3,000.00	3,000.00	6,000.00	186.00	43.50	450.00	300.00	979.50	2,020.50
	$ 14,000.00	$ 14,000.00	$ 28,000.00	$ 868.00	$ 203.00	$ 3,250.00	$ 900.00	$ 5,221.00	$ 8,779.00

NOVEMBER Employer Payroll Taxes

Tax	Earnings	Rate	Amount
OASDI	$ 14,000.00	6.20%	$ 868.00
Medicare	14,000.00	1.45%	203.00
SUTA*	6,000.00	5.40%	324.00
FUTA*	6,000.00	0.60%	36.00
			$ 1,431.00

*Employee	Total Taxable Earnings	Beginning Cummulative Earnings	Taxable Earnings this Period
Jones	$ 7,000.00	$ 6,000.00	$ 1,000.00
Smith	7,000.00	5,000.00	2,000.00
Martin	7,000.00	3,000.00	3,000.00
			$ 6,000.00

Comprehensive Problem, cont.
Requirement 1, cont.

DECEMBER Payroll

Employee	Earnings			Withholdings					Net Pay
	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	Total Withholdings	
Jones	$ 12,000.00	$ 6,000.00	$ 18,000.00	$ 372.00	$ 87.00	$ 1,800.00	$ 300.00	$ 2,559.00	$ 3,441.00
Smith	10,000.00	5,000.00	15,000.00	310.00	72.50	1,000.00	300.00	1,682.50	3,317.50
Martin	6,000.00	3,000.00	9,000.00	186.00	43.50	450.00	300.00	979.50	2,020.50
	$ 28,000.00	$ 14,000.00	$ 42,000.00	$ 868.00	$ 203.00	$ 3,250.00	$ 900.00	$ 5,221.00	$ 8,779.00

DECEMBER Employer Payroll Taxes

Tax	Earnings	Rate	Amount
OASDI	$ 14,000.00	6.20%	$ 868.00
Medicare	14,000.00	1.45%	203.00
SUTA*	1,000.00	5.40%	54.00
FUTA*	1,000.00	0.60%	6.00
			$ 1,131.00

*Employee	Total Taxable Earnings	Beginning Cummulative Earnings	Taxable Earnings this Period
Jones	$ 7,000.00	$ 12,000.00	$ 0.00
Smith	7,000.00	10,000.00	0.00
Martin	7,000.00	6,000.00	1,000.00
			$ 1,000.00

Comprehensive Problem, cont.
Requirement 2

Date	Accounts	Debit	Credit
Oct. 1	Cash (25,000 shares × $10 per share)	250,000	
	Common Stock—$1 Par Value (25,000 × $1 per share)		25,000
	Paid-in Capital in Excess of Par—Common ($250,000 – $25,000)		225,000
1	Land	40,000	
	Building	160,000	
	Mortgages Payable		200,000
1	Store Fixtures	10,000	
	Notes Payable		10,000
3	Merchandise Inventory	125,000	
	Accounts Payable		125,000
15	Utilities Expense	160	
	Cash		160
31	Cash	196,100	
	Sales Tax Payable ($185,000 × 0.06)		11,100
	Sales Revenue		185,000
	Cost of Goods Sold	110,000	
	Merchandise Inventory		110,000
	Warranty Expense ($185,000 × 0.08)	14,800	
	Estimated Warranty Payable		14,800
31	Salaries Expense	14,000	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	Employee Income Taxes Payable		3,250
	Employee Health Insurance Payable		900
	Cash		8,779

Comprehensive Problem, cont.
Requirement 2, cont.

Date	Accounts	Debit	Credit
Oct. 31	Payroll Tax Expense	1,911	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	State Unemployment Taxes Payable		756
	Federal Unemployment Taxes Payable		84
Nov. 1	Interest Expense	1,333	
	Mortgages Payable	1,092	
	Cash		2,425
3	Accounts Payable	125,000	
	Cash		125,000
10	Merchandise Inventory	150,000	
	Accounts Payable		150,000
12	Treasury Stock—Common (500 shares × $15 per share)	7,500	
	Cash		7,500
15	FICA—OASDI Taxes Payable ($868 + $868)	1,736	
	FICA—Medicare Taxes Payable ($203 + $203)	406	
	Employee Income Taxes Payable	3,250	
	Employee Health Insurance Payable	900	
	State Unemployment Taxes Payable	756	
	Federal Unemployment Taxes Payable	84	
	Cash		7,132
15	Sales Tax Payable	11,100	
	Cash		11,100
16	Estimated Warranty Payable	6,000	
	Cash		6,000
17	Cash Dividends ((25,000 shares – 500 shares) × $1 per share))	24,500	
	Dividends Payable—Common		24,500

Comprehensive Problem, cont.
Requirement 2, cont.

Date	Accounts	Debit	Credit
Nov. 18	Utilities Expense	245	
	Cash		245
27	Dividends Payable—Common	24,500	
	Cash		24,500
30	Cash	148,400	
	Sales Tax Payable ($140,000 × 0.06)		8,400
	Sales Revenue		140,000
	Cost of Goods Sold	84,000	
	Merchandise Inventory		84,000
	Warranty Expense ($140,000 × 0.08)	11,200	
	Estimated Warranty Payable		11,200
30	Salaries Expense	14,000	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	Employee Income Taxes Payable		3,250
	Employee Health Insurance Payable		900
	Cash		8,779
30	Payroll Tax Expense	1,431	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	State Unemployment Taxes Payable		324
	Federal Unemployment Taxes Payable		36
Dec. 1	Interest Expense	1,326	
	Mortgages Payable	1,099	
	Cash		2,425

Comprehensive Problem, cont.
Requirement 2, cont.

Date	Accounts	Debit	Credit
Dec. 10	Accounts Payable	150,000	
	Cash		150,000
12	Estimated Warranty Payable	7,500	
	Cash		7,500
15	Cash (300 shares × $20 per share)	6,000	
	Treasury Stock—Common (300 shares × $15 per share)		4,500
	Paid-in Capital from Treasury Stock Transactions		1,500
15	FICA—OASDI Taxes Payable ($868 + $868)	1,736	
	FICA—Medicare Taxes Payable ($203 + $203)	406	
	Employee Income Taxes Payable	3,250	
	Employee Health Insurance Payable	900	
	State Unemployment Taxes Payable	324	
	Federal Unemployment Taxes Payable	36	
	Cash		6,652
15	Sales Tax Payable	8,400	
	Cash		8,400
18	Utilities Expense	220	
	Cash		220
19	Merchandise Inventory	90,000	
	Accounts Payable		90,000
31	Cash	222,600	
	Sales Tax Payable ($210,000 × 0.06)		12,600
	Sales Revenue		210,000
	Cost of Goods Sold	126,000	
	Merchandise Inventory		126,000
	Warranty Expense ($210,000 × 0.08)	16,800	
	Estimated Warranty Payable		16,800

Comprehensive Problem, cont.
Requirement 2, cont.

Date	Accounts	Debit	Credit
Dec. 31	Salaries Expense	14,000	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	Employee Income Taxes Payable		3,250
	Employee Health Insurance Payable		900
	Cash		8,779
31	Payroll Tax Expense	1,131	
	FICA—OASDI Taxes Payable		868
	FICA—Medicare Taxes Payable		203
	State Unemployment Taxes Payable		54
	Federal Unemployment Taxes Payable		6

Comprehensive Problem, cont.
Requirements 3 and 5

Cash

Oct. 1	250,000	160	Oct. 15
Oct. 31	196,100	8,779	Oct. 31
Nov. 30	148,400	2,425	Nov. 1
Dec. 15	6,000	125,000	Nov. 3
Dec. 31	222,600	7,500	Nov. 12
		7,132	Nov. 15
		11,100	Nov. 15
		6,000	Nov. 16
		245	Nov. 18
		24,500	Nov. 27
		8,779	Nov. 30
		2,425	Dec. 1
		150,000	Dec. 10
		7,500	Dec. 12
		6,652	Dec. 15
		8,400	Dec. 15
		220	Dec. 18
		8,779	Dec. 31
Bal.	437,504		

Merchandise Inventory

Oct. 3	125,000	110,000	Oct. 31
Nov. 10	150,000	84,000	Nov. 30
Dec. 19	90,000	126,000	Dec. 31
Bal.	45,000		

Land

Oct. 1	40,000		
Bal.	40,000		

Building

Oct. 1	160,000		
Bal.	160,000		

Store Fixtures

Oct. 1	10,000		
Bal.	10,000		

Comprehensive Problem, cont.
Requirements 3 and 5

Accumulated Depreciation

		1,000	Adj. a
		125	Adj. b
		1,125	Bal.

Accounts Payable

Nov. 3	125,000	125,000	Oct. 3
Dec. 10	150,000	150,000	Nov. 10
		90,000	Dec. 19
		90,000	Bal.

Employee Income Taxes Payable

Nov. 15	3,250	3,250	Oct. 31
Dec. 15	3,250	3,250	Nov. 30
		3,250	Dec. 31
		3,250	Bal.

FICA—OASDI Taxes Payable

Nov. 15	1,736	868	Oct. 31
Dec. 15	1,736	868	Oct. 31
		868	Nov. 30
		868	Nov. 30
		868	Dec. 31
		868	Dec. 31
		1,736	Bal.

FICA—Medicare Taxes Payable

Nov. 15	406	203	Oct. 31
Dec. 15	406	203	Oct. 31
		203	Nov. 30
		203	Nov. 30
		203	Dec. 31
		203	Dec. 31
		406	Bal.

Employee Health Insurance Payable

Nov. 15	900	900	Oct. 31
Dec. 15	900	900	Nov. 30
		900	Dec. 31
		900	Bal.

Comprehensive Problem, cont.
Requirements 3 and 5

State Unemployment Taxes Payable

Nov. 15	756	756	Oct. 31
Dec. 15	324	324	Nov. 30
		54	Dec. 31
		54	Bal.

Federal Unemployment Taxes Payable

Nov. 15	84	84	Oct. 31
Dec. 15	36	36	Nov. 30
		6	Dec. 31
		6	Bal.

Income Tax Payable

		36,000	Adj. e
		36,000	Bal.

Sales Tax Payable

Nov. 15	11,100	11,100	Oct. 31
Dec. 15	8,400	8,400	Nov. 30
		12,600	Dec. 31
		12,600	Bal.

Estimated Warranty Payable

Nov. 16	6,000	14,800	Oct. 31
Dec. 12	7,500	11,200	Nov. 30
		16,800	Dec. 31
		29,300	Bal.

Interest Payable

		250	Adj. c
		1,319	Adj. d
		1,569	Bal.

Dividends Payable

Nov. 27	24,500	24,500	Nov. 17
		0	Bal.

Notes Payable

		10,000	Oct. 1
		10,000	Bal.

Comprehensive Problem, cont.
Requirements 3 and 5

Mortgages Payable

Nov. 1	1,092	200,000	Oct. 1
Dec. 1	1,099		
		197,809	Bal.

Common Stock—$1 Par Value

		25,000	Oct. 1
		25,000	Bal.

Paid-in Capital in Excess of Par

		225,000	Oct. 1
		225,000	Bal.

Treasury Stock—Common

Nov. 12	7,500	4,500	Dec. 15
Bal.	3,000		

Paid-in Capital from Treasury Stock Trans.

		1,500	Dec. 15
		1,500	Bal.

Retained Earnings

Cash Dividends

Nov. 17	24,500		
Bal.	24,500		

Sales Revenue

		185,000	Oct. 31
		140,000	Nov. 30
		210,000	Dec. 31
		535,000	Bal.

Cost of Goods Sold

Oct. 31	110,000		
Nov. 30	84,000		
Dec. 31	126,000		
Bal.	320,000		

Comprehensive Problem, cont.
Requirements 3 and 5

Salaries Expense		
Oct. 31	14,000	
Nov. 30	14,000	
Dec. 31	14,000	
Bal.	42,000	

Payroll Tax Expense		
Oct. 31	1,911	
Nov. 30	1,431	
Dec. 31	1,131	
Bal.	4,473	

Utilities Expense		
Oct. 15	160	
Nov. 18	245	
Dec. 18	220	
Bal.	625	

Depreciation Expense		
Adj. a	1,000	
Adj. b	125	
Bal.	1,125	

Warranty Expense		
Oct. 31	14,800	
Nov. 30	11,200	
Dec. 31	16,800	
Bal.	42,800	

Income Tax Expense		
Adj. e	36,000	
Bal.	36,000	

Interest Expense		
Nov. 1	1,333	
Dec. 1	1,326	
Bal.	2,659	
Adj. c	250	
Adj. d	1,319	
Bal.	4,228	

Comprehensive Problem, cont.
Requirement 4

Date	Accounts	Debit	Credit
	Adjusting Entries		
a.	Depreciation Expense[1]	1,000	
	Accumulated Depreciation		1,000
b.	Depreciation Expense[2]	125	
	Accumulated Depreciation		125
c.	Interest Expense[3]	250	
	Interest Payable		250
d.	Interest Expense[4]	1,319	
	Interest Payable		1,319
e.	Income Tax Expense	36,000	
	Income Tax Payable		36,000

(1) $160,000 / 40 years × 3/12 = $1,000

(2) $10,000 / 20 years × 3/12 = $125

(3) $10,000 × 0.10 × 3/12 = $250

(4) From the amortization table prepared in Requirement 1

Comprehensive Problem, cont.
Requirement 5

THE TUSQUITTEE COMPANY
Adjusted Trial Balance
December 31, 2018

	Balance	
Account	**Debit**	**Credit**
Cash	$ 437,504	
Merchandise Inventory	45,000	
Land	40,000	
Building	160,000	
Store Fixtures	10,000	
Accumulated Depreciation		$ 1,125
Accounts Payable		90,000
Employee Income Taxes Payable		3,250
FICA—OASDI Taxes Payable		1,736
FICA—Medicare Taxes Payable		406
Employee Health Insurance Payable		900
State Unemployment Taxes Payable		54
Federal Unemployment Taxes Payable		6
Income Tax Payable		36,000
Sales Tax Payable		12,600
Estimated Warranty Payable		29,300
Interest Payable		1,569
Dividends Payable		
Notes Payable		10,000
Mortgages Payable		197,809
Common Stock—$1 Par Value		25,000
Paid-in Capital in Excess of Par—Common		225,000
Treasury Stock—Common	3,000	
Paid-in Capital from Treasury Stock Transactions		1,500
Retained Earnings		
Cash Dividends	24,500	
Sales Revenue		535,000
Cost of Goods Sold	320,000	
Salaries Expense	42,000	
Payroll Tax Expense	4,473	
Utilities Expense	625	
Depreciation Expense	1,125	
Warranty Expense	42,800	
Income Tax Expense	36,000	
Interest Expense	4,228	
Total	$ 1,171,255	$ 1,171,255

Comprehensive Problem, cont.
Requirement 6

THE TUSQUITTEE COMPANY Income Statement For Quarter Ended December 31, 2018		
Net Sales Revenue		$ 535,000
Cost of Goods Sold		320,000
Gross Profit		215,000
Operating Expenses:		
Salaries Expense	$ 42,000	
Payroll Tax Expense	4,473	
Utilities Expense	625	
Depreciation Expense	1,125	
Warranty Expense	42,800	
Total Operating Expenses		91,023
Operating Income		123,977
Other Income and (Expenses)		
Interest Expense	(4,228)	
Total Other Income and (Expenses)		(4,228)
Income before Income Taxes		119,749
Income Tax Expense		36,000
Net Income		$ 83,749

THE TUSQUITTEE COMPANY Statement of Retained Earnings For Quarter Ended December 31, 2018	
Retained Earnings, October 1, 2018	$ 0
Net income for the year	83,749
	83,749
Dividends	(24,500)
Retained Earnings, December 31, 2018	$ 59,249

Comprehensive Problem, cont.
Requirement 6, cont.

THE TUSQUITTEE COMPANY			
Balance Sheet			
December 31, 2018			
Assets			
Current Assets:			
Cash		$ 437,504	
Merchandise Inventory		45,000	
Total Current Assets			$ 482,504
Property, Plant, and Equipment:			
Land		40,000	
Building	$ 160,000		
Store Fixtures	10,000		
Less: Accumulated Depreciation	(1,125)	168,875	
Total Property, Plant and Equipment			208,875
Total Assets			$ 691,379

(continued on next page)

Comprehensive Problem, cont.
Requirement 6, cont.

THE TUSQUITTEE COMPANY
Balance Sheet
December 31, 2018

Liabilities		
Current Liabilities:		
Accounts Payable	$ 90,000	
Employee Income Taxes Payable	3,250	
FICA—OASDI Taxes Payable	1,736	
FICA—Medicare Taxes Payable	406	
Employee Health Insurance Payable	900	
State Unemployment Taxes Payable	54	
Federal Unemployment Taxes Payable	6	
Income Tax Payable	36,000	
Sales Tax Payable	12,600	
Estimated Warranty Payable	29,300	
Interest Payable	1,569	
Notes Payable	10,000	
Current Portion of Mortgage Payable	13,840	
Total Current Liabilities		$ 199,661
Long-Term Liabilities		
Mortgage Payable		183,969
Total Liabilities		383,630
Stockholders' Equity		
Paid-in Capital:		
Common Stock—$1 Par Value, 100,000 shares authorized, 25,000 shares issued, 24,800 shares outstanding	25,000	
Paid-in Capital in Excess of Par—Common	225,000	
Paid-in Capital from Treasury Stock Transactions	1,500	
Total Paid-in Capital		251,500
Retained Earnings		59,249
Treasury Stock—Common, 200 shares at cost		(3,000)
Total Stockholders' Equity		307,749
Total Liabilities and Stockholders' Equity		$ 691,379

Comprehensive Problem, cont.
Requirement 7

Times-interest-earned ratio	
Net Income	$ 83,749
+ Income Tax Expense	+ 36,000
+ Interest Expense	+ 4,228
Total	$ 123,977
÷ Interest Expense	÷ 4,228
Ratio for 2018	29.32

Debt to equity ratio	=	Total liabilities	/	Total equity
	=	$383,630	/	$307,749
	=	1.25		

Earnings per share	=	(Net income − Preferred dividends)	/	Average number of common shares outstanding
	=	($83,749 − $0)	/	(0 shares + 24,800 shares) / 2
	=	$83,749	/	12,400
	=	$6.75 per share		

Price/earnings ratio	=	Market price per share of common stock	/	Earnings per share
	=	$25.00	/	$6.75
	=	3.70		

Rate of return on common stockholders' equity	=	(Net income − Preferred dividends)	/	Average common stockholders' equity
	=	($83,749 − 0)	/	($0 + $307,749) / 2
	=	$83,749	/	$153,874.5
	=	0.54 = 54%		

Comprehensive Problem, cont.
Requirement 8

	Plan 1: Issue $200,000 of Common Stock		Plan 2: Issue $200,000 of 12% Bonds Payable	
Net income before new project		$ 250,000		$ 250,000
Expected income on the new project before interest and income tax expenses	$ 75,000		$ 75,000	
Less: Interest expense ($200,000 × 0.12)	0		24,000	
Project income before income tax	75,000		51,000	
Less: Income tax expense (30%)	22,500		15,300	
Project net income		52,500		35,700
Net income with new project		$ 302,500		$ 285,700
Earnings per share with new project:				
Plan 1 ($302,500 / 35,000 shares)		$ 8.64		
Plan 2 ($285,700 / 25,000 shares)				$ 11.43

Plan 1, issuing common stock, will result in more income for the company. Plan 2, issuing bonds payable, will result in a higher EPS.

Critical Thinking

Tying It All Together Case 13-1

Requirement 1
Facebook has never paid any cash dividends on its common stock. The company states that they intend to retain any future earnings and do not expect to pay dividends in the foreseeable future. In addition, the company states that its credit policies restrict the company's ability to pay dividends.

Requirement 2
The par value of the Class A common stock is $0.000006 per share.

Requirement 3
Facebook does not have any treasury stock because it is not reported on the balance sheet in the Stockholders' Equity section.

Decision Case 13-1
Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Patent	100,000	
	Common Stock—$1 Par Value ($1 per share × 100,000 shares)		100,000

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Plan 1	Cash	150,000	
	Preferred Stock—$100 Par Value ($100 per share × 1,500 shares)		150,000
Plan 2	Cash	100,000	
	Preferred Stock—No Par Value		100,000
	Cash	70,000	
	Common Stock—$1 Par Value ($1 per share × 70,000 shares)		70,000

Decision Case 13-1, cont.
Requirement 3

Kay and Lauder Balance Sheet (Partial) Plan 1	
Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—6%, $100 Par Value, nonvoting, noncumulative; 5,000 shares authorized, 1,500 shares issued and outstanding	$ 150,000
Common Stock—$1 Par Value; 500,000 shares authorized, 100,000 shares issued and outstanding	100,000
Total Paid-In Capital	250,000
Retained Earnings ($180,000 – $30,000)	150,000
Total Stockholders' Equity	$ 400,000

Kay and Lauder Balance Sheet (Partial) Plan 2	
Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—$5 No Par, 5,000 shares authorized, 1,000 shares issued and outstanding	$ 100,000
Common Stock—$1 Par Value; 500,000 shares authorized, 170,000 shares issued and outstanding	170,000
Total Paid-In Capital	270,000
Retained Earnings ($180,000 – $30,000)	150,000
Total Stockholders' Equity	$ 420,000

Decision Case 13-1, cont.
Requirement 4

Although Plan 2 raises more capital than Plan 1, Plan 1 appears to fit the plans of Kay and Lauder better than Plan 2. Recall that their primary goal is to raise as much capital as possible without giving up control of the business.

Under Plan 2, the preferred stock is voting. The outside stockholders would have 120,000 votes [70,000 common votes + 50,000 preferred votes (1,000 shares × 50 votes per share)]. Kay and Lauder would have only 100,000 votes and would, therefore, lose control.

Under Plan 1, however, preferred stockholders have no votes. Kay and Lauder would have complete control, because they would hold all the voting shares.

The reason that Kay and Lauder are switching from a partnership to a corporation is to raise capital. Plan 2 would give the business $20,000 more capital than Plan 1. Is that enough to convince Kay and Lauder to give up control? Probably not. If the $150,000 raised by issuing nonvoting preferred stock under Plan 1 is sufficient for business operations, then Kay and Lauder are better off keeping control of the business by choosing Plan 1.

Financial Statement Case 13-1
Requirement 1

Target did not have any preferred stock at January 30, 2016.

Requirement 2

Yes, Target has authorized 5 million shares of preferred stock, but no shares were issued or outstanding.

Requirement 3

Target had 602,226,517 shares of common stock outstanding on January 30, 2016. This is shown at the bottom of the Consolidated Statements of Financial Position (balance sheet) and in the first column on the Consolidated Statements of Stockholders’ Investment (statement of stockholders’ equity).

Requirement 4

Yes, Target paid $1,362 million in cash dividends in the year ending January 30, 2016.

Requirement 5

Earnings per share	=	(Net income − Preferred dividends)	/	Weighted average shares outstanding
	=	($3,363 – 0)	/	627.7
	=	$3,363	/	627.7
	=	$5.36 per share		

*Statement includes a note that per share amounts may not foot due to rounding.

Team Project 13-1

Students' answers will vary.

Communication Activity 13-1

A stock split is fundamentally different from a stock dividend. A stock split increases the number of issued and outstanding shares of stock. A stock split also decreases the par value per share, whereas stock dividends do not affect the par value per share. Both usually have an impact on the market price of the stock. With more stock outstanding, the market price usually declines. A stock dividend increases the number of shares issued and outstanding. With both stock splits and stock dividends, the stockholders receive additional shares of stock.

14 The Statement of Cash Flows

Why Doesn't the Business Have Any Cash?

David National reviewed his company's income statement with a confused look on his face. The statement reported a net profit of $20,000 for the past quarter. David knew that sales had been increasing in his small sporting equipment retail shop, and he expected this trend to continue through the end of the year. But David didn't understand why the income statement showed a profit. The company's payroll clerk had called him earlier in the day and told him that there wasn't enough cash in the bank to pay the employees's monthly salaries.

It didn't make sense to David that the company could report a $20,000 profit on the income statement but not have enough cash to pay the payroll. He figured that the newly hired accountant, Mark Maloney, must have made a mistake.

David picked up the phone to call Mark. He had several questions to ask him. Why didn't the company have any cash in the bank? How was the company using its cash? How could the company report a $20,000 profit but not have that much cash in the bank? Where did the cash received from customers go?

After speaking with his accountant, David learned that the profit reported on the income statement didn't represent cash and that it was important that he review the company's statement of cash flows. The statement of cash flows, Mark told him, reports the cash receipts and cash payments of the business. It shows the sources and uses of cash and helps answer the question "Where did the cash go?"

Why Is Cash So Important?

You can probably answer that question from your own experience. It takes cash to pay bills and to generate future income for a business. Businesses, such as **Amazon.com, Inc.,** a retail Web site that sells everything from sporting equipment to household goods, closely monitors cash. Amazon.com is interested in where its cash came from (receipts) and how its cash is spent (payments). One way for Amazon.com to monitor its cash receipts and payments is by preparing a statement of cash flows. For example, on Amazon.com's 2015 statement of cash flows, the corporation reported that it paid $4.5 million purchasing property and equipment and that it paid $273 million cash for income taxes (net of refunds). It also reported that from 2014 to 2015 the corporation had an increase in cash of $1,333 million, even though net income was only $596 million. In this chapter, you learn what a statement of cash flows is and why it is useful to a business. In addition, you learn how to prepare the statement and understand why companies and investors carefully monitor the statement of cash flows.

Chapter 14 Learning Objectives

1 Identify the purposes of the statement of cash flows and distinguish among operating, investing, and financing cash flows

2 Prepare the statement of cash flows by the indirect method

3 Use free cash flow to evaluate business performance

4 Prepare the statement of cash flows by the direct method (Appendix 14A)

5 Prepare the statement of cash flows by the indirect method using a spreadsheet (Appendix 14B)

WHAT IS THE STATEMENT OF CASH FLOWS?

Learning Objective 1
Identify the purposes of the statement of cash flows and distinguish among operating, investing, and financing cash flows

Up to this point, you have learned about three financial statements—the income statement, the statement of retained earnings, and the balance sheet. Each of these financial statements reports specific items about a company. The income statement reports net income or net loss for the time period. The statement of retained earnings reports the changes in retained earnings during the time period, and the balance sheet reports a company's financial position. None of these statements reports specifically on the changes in cash.

When a comparative balance sheet for two periods is presented, it shows whether cash increased or decreased. But the balance sheet does not show *why* cash increased or decreased. We need the statement of cash flows for that. The **statement of cash flows** reports on a business's cash receipts and cash payments for a specific period. This statement does the following:

Statement of Cash Flows
Reports on a business's cash receipts and cash payments for a specific period.

Cash Flows
Cash receipts and cash payments of a business.

- Reports on the **cash flows** of a business—where cash came from (receipts) and how cash was spent (payments).
- Reports why cash increased or decreased during the period.
- Covers a span of time and is dated the same as the income statement—"Year Ended December 31, 2018," for example.

Purpose of the Statement of Cash Flows

The statement of cash flows explains why net income as reported on the income statement does not equal the change in the cash balance. In essence, the statement of cash flows is the link between the accrual-based income statement and the cash reported on the balance sheet.

How do people use cash flow information? The statement of cash flows helps do the following:

- **Predict future cash flows.** Past cash receipts and payments help predict future cash flows.
- **Evaluate management.** Wise investment decisions help the business prosper, while unwise decisions cause the business to have problems. Investors and creditors use cash flow information to evaluate managers' decisions.
- **Predict ability to pay debts and dividends.** Lenders want to know whether they will collect on their loans. Stockholders want dividends on their investments. The statement of cash flows helps make these predictions.

Classification of Cash Flows

There are three basic types of cash flow activities, and the statement of cash flows has a section for each:

- Operating activities
- Investing activities
- Financing activities

Each section reports cash inflows (cash receipts coming into the company) and cash outflows (cash payments going out of the company) based on these three divisions.

Operating Activities

Operating Activities
Activities that create revenue or expense in the entity's business; a section of the statement of cash flows.

Operating activities is the first section on the statement of cash flows and is often the most important category. The **operating activities** section reports on activities that create revenue or expense in the entity's business. It reflects the day-to-day operations of the business such as cash receipts (cash inflows) from customers for the sales of merchandise inventory and services and the cash payments (cash outflows) for purchases of merchandise inventory or payment of operating expenses. The operating activities section also includes cash receipts (cash inflows) for interest revenue and dividend income and cash payments (cash outflows) for interest expense and income tax expense.

Investing Activities

Investing Activities
Activities that increase or decrease long-term assets; a section of the statement of cash flows.

Investing activities is the second category listed on the statement of cash flows. This section reports cash receipts and cash payments that increase or decrease long-term assets such as property, plant, equipment, notes receivable, and investments. It includes the cash inflow from selling and the cash outflow for the purchase of these long-term assets. In addition, it includes the lending (cash outflow) and collection (cash inflow) of long-term notes receivable.

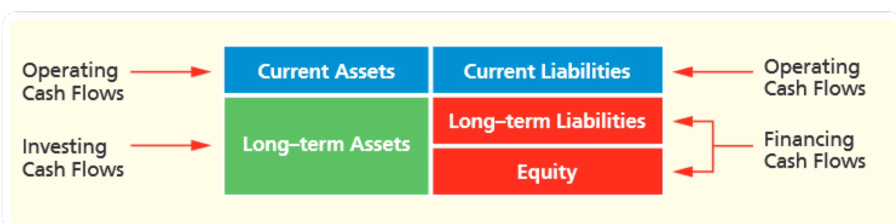
Financing Activities

Financing Activities
Activities that increase or decrease long-term liabilities and equity; a section of the statement of cash flows.

The last category on the statement of cash flows is **financing activities**. Financing activities include cash inflows and outflows involved in long-term liabilities and equity. This includes issuing stock, paying dividends, and buying and selling treasury stock. It also includes borrowing money and paying off long-term liabilities such as notes payable, bonds payable, and mortgages payable.

Each section of the statement of cash flows affects a different part of the balance sheet. The operating activities section reports on how cash flows affect the current accounts—current assets and current liabilities. Investing activities affect the long-term assets. And the financing activities affect long-term liabilities and equity. Exhibit 14-1 shows the relationship between operating, investing, and financing cash flows and the various parts of the balance sheet.

Exhibit 14-1 | **Operating, Investing, and Financing Cash Flows and the Balance Sheet Accounts**



Non-cash Investing and Financing Activities

The three sections of the statement of cash flows report only activities that involve cash. Companies do make investments that do not require cash. They also obtain financing that does not involve cash. Such transactions are called **non-cash investing and financing activities**. Examples of these activities include the purchase of equipment financed by a long-term note payable or the contribution of equipment by a stockholder in exchange for common stock. These activities are not included in the statement of cash flows. Instead, they appear either as a separate schedule at the bottom of the statement or in the notes to the financial statements.

Exhibit 14-2 summarizes the different sections on the statement of cash flows.

Non-cash Investing and Financing Activities
Investing and financing activities that do not involve cash.

Under IFRS, interest revenue and dividend income may be reported either as an operating activity or as an investing activity. Interest expense and dividends paid may be reported either as an operating activity or as a financing activity.

Exhibit 14-2 | Sections of the Statement of Cash Flows

Operating Activities	Cash Inflows: • From customers for the sales of merchandise inventory and services • For interest revenue and dividend income Cash Outflows: • For the purchase of merchandise inventory and payment of operating expenses • For interest expense and income tax expense
Investing Activities	Cash Inflows: • From the sale of property, plant, equipment, and investments • From the collection of long-term notes receivable Cash Outflows: • To purchase property, plant, equipment, and investments • For loans made to borrowers
Financing Activities	Cash Inflows: • From issuance of stock and selling treasury stock • From receipt of borrowing money Cash Outflows: • For payment of dividends and buying treasury stock • For repayments of loans
Non-cash Investing and Financing Activities	A separate schedule that includes investing and financing activities that *do not* include cash

The statement of cash flows reports only activities that involve either the receipt of cash or the payment of cash. If a transaction does not involve cash, it will not be included in the operating, investing, or financing sections of the statement of cash flows.

Two Formats for Operating Activities

There are two ways to format the operating activities section of the statement of cash flows:

- The **indirect method** starts with net income and adjusts it to net cash provided by operating activities.
- The **direct method** restates the income statement in terms of cash. The direct method shows all the cash receipts and all the cash payments from operating activities.

Indirect Method
A format of the operating activities section of the statement of cash flows; starts with net income and reconciles to net cash provided by operating activities.

Direct Method
A format of the operating activities section of the statement of cash flows; lists the operating cash receipts and cash payments.

IFRS permits the use of either the direct or indirect method.

The indirect and direct methods use different computations but produce the same amount of net cash flow from operating activities. Both methods present investing activities and financing activities in exactly the same format. Only the *operating activities* section is presented differently between the two methods.

We begin with the indirect method because most companies use it. To focus on the direct method, review Appendix 14A, located at the end of this chapter.

Try It!

Identify each item as operating (O), investing (I), financing (F), or non-cash (N).

1. Cash receipt from the sale of equipment
2. Cash payment for salaries
3. Cash receipt from the collection of long-term notes receivable
4. Purchase of equipment in exchange for notes payable
5. Cash receipt from the issuance of common stock

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S14-1 and S14-2. MyAccountingLab

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE INDIRECT METHOD?

Learning Objective 2
Prepare the statement of cash flows by the indirect method

To prepare the statement of cash flows, you need the income statement for the current year, as well as the balance sheets from the current and prior years. In addition, you need to review the transactions for some additional information. For illustrative purposes, we will use ShopMart, Inc., a fictitious retail store that sells electronics, home furnishings, home supplies, and more. ShopMart's comparative balance sheet is shown in Exhibit 14-3, and

its income statement is shown in Exhibit 14-4 (on the next page). Additional information provided by ShopMart includes the following:

- Purchased $310,000 in plant assets by paying cash.
- Sold plant assets with a cost of $55,000 and accumulated depreciation of $15,000, yielding a gain of $10,000.
- Received $90,000 cash from issuance of notes payable.
- Paid $10,000 cash to retire notes payable.
- Received $120,000 cash from issuing shares of common stock.
- Paid $20,000 cash for purchase of shares of treasury stock.

Exhibit 14-3 | **Comparative Balance Sheet**

SHOPMART, INC.
Comparative Balance Sheet
December 31, 2018 and 2017

	2018	2017	Increase (Decrease)
Assets			
Current Assets:			
Cash	$ 22,000	$ 42,000	$ (20,000)
Accounts Receivable	90,000	73,000	17,000
Merchandise Inventory	143,000	145,000	(2,000)
Long-term Assets:			
Plant Assets	507,000	252,000	255,000
Accumulated Depreciation—Plant Assets	(47,000)	(42,000)	(5,000)
Total Assets	$ 715,000	$ 470,000	$ 245,000
Liabilities			
Current Liabilities:			
Accounts Payable	$ 90,000	$ 50,000	$ 40,000
Accrued Liabilities	5,000	10,000	(5,000)
Long-term Liabilities:			
Notes Payable	160,000	80,000	80,000
Total Liabilities	255,000	140,000	115,000
Stockholders' Equity			
Common Stock, no par	370,000	250,000	120,000
Retained Earnings	110,000	80,000	30,000
Treasury Stock	(20,000)	0	(20,000)
Total Stockholders' Equity	460,000	330,000	130,000
Total Liabilities and Stockholders' Equity	$ 715,000	$ 470,000	$ 245,000

Exhibit 14-4 | **Income Statement**

SHOPMART, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 286,000
Cost of Goods Sold		156,000
Gross Profit		130,000
Operating Expenses:		
Salaries and Wages Expense	$ 56,000	
Depreciation Expense—Plant Assets	20,000	
Other Operating Expense	16,000	
Total Operating Expenses		92,000
Operating Income		38,000
Other Income and (Expenses):		
Interest Revenue	12,000	
Dividend Revenue	9,000	
Gain on Disposal of Plant Assets	10,000	
Interest Expense	(15,000)	
Total Other Income and (Expenses)		16,000
Income Before Income Taxes		54,000
Income Tax Expense		14,000
Net Income		$ 40,000

To prepare the statement of cash flows by the indirect method, we follow Steps 1–5:

Step 1: Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also adjust for gains or losses from long-term assets and non-cash expenses such as depreciation expense.

Step 2: Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.

Step 3: Complete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.

Step 4: Compute the net increase or decrease in cash during the year. The change in cash is the key reconciling figure for the statement of cash flows and must match the change in cash reported on the comparative balance sheet.

Step 5: Prepare a separate schedule reporting any non-cash investing and financing activities.

Let's apply these steps to show the operating activities of ShopMart. Exhibit 14-5 presents the completed statement of cash flows.

Exhibit 14-5 | **Statement of Cash Flows—Indirect Method**

SHOPMART, INC. Statement of Cash Flows Year Ended December 31, 2018			
Cash Flows from Operating Activities:			
Net Income		$ 40,000	
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:			
Depreciation Expense—Plant Assets	$ 20,000		
Gain on Disposal of Plant Assets	(10,000)		Step 1: Operating Activities
Increase in Accounts Receivable	(17,000)		
Decrease in Merchandise Inventory	2,000		
Increase in Accounts Payable	40,000		
Decrease in Accrued Liabilities	(5,000)	30,000	
Net Cash Provided by Operating Activities		70,000	
Cash Flows from Investing Activities:			
Cash Payment for Acquisition of Plant Assets	(310,000)		Step 2: Investing Activities
Cash Receipt from Disposal of Plant Assets	50,000		
Net Cash Used for Investing Activities		(260,000)	
Cash Flows from Financing Activities:			
Cash Receipt from Issuance of Notes Payable	90,000		
Cash Payment of Notes Payable	(10,000)		Step 3: Financing Activities
Cash Receipt from Issuance of Common Stock	120,000		
Cash Payment for Purchase of Treasury Stock	(20,000)		
Cash Payment of Dividends	(10,000)		
Net Cash Provided by Financing Activities		170,000	
Net Increase (Decrease) in Cash		(20,000)	Step 4: Net Increase (Decrease) in Cash
Cash Balance, December 31, 2017		42,000	
Cash Balance, December 31, 2018		$ 22,000	

Cash Flows from Operating Activities

When using the indirect method, the statement of cash flows operating activities section begins with net income (or net loss) because revenues and expenses, which affect net income, produce cash receipts and cash payments. Revenues bring in cash receipts, and expenses must be paid. But net income as shown on the income statement is accrual-based, and the cash flows (cash basis net income) do not always equal the accrual basis revenues and expenses. For example, sales *on account* generate revenues that increase net income, but the company has not yet collected cash from those sales. Accrued expenses decrease net income, but the company has not paid cash *if the expenses are accrued.*

To go from net income to net cash flow from operating activities, we must make some adjustments to net income on the statement of cash flows. These additions and subtractions follow net income and are labeled *Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities.*

Depreciation, Depletion, and Amortization Expenses

These adjustments include adding back non-cash expenses such as depreciation, depletion, and amortization expenses. These expenses are added back to net income to reconcile net income to net cash flow from operating activities. Let's see why this occurs. Depreciation is recorded as follows:

A↓		L	+	E↓
Accumulated Depreciation↑	=			Depreciation Expense↑

Date	Accounts and Explanation	Debit	Credit
	Depreciation Expense—Plant Assets	20,000	
	Accumulated Depreciation—Plant Assets		20,000

You can see that depreciation does not affect cash as there is no Cash account in the journal entry. Depreciation is a non-cash expense. The cash outflow related to depreciation occurred when the asset was purchased, not as it is depreciated. However, depreciation, like all the other expenses, decreases net income. Therefore, to go from net income to net cash flows, we must remove depreciation by adding it back to net income.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 20,000	

Suppose you had only two transactions during the period:

- Cash sale of $60,000
- Depreciation expense of $20,000

Accrual basis net income is $40,000 ($60,000 − $20,000), but net cash flow from operations is $60,000. To reconcile from net income, depreciation of $20,000 must be added to net income, $40,000, to determine net cash flow from operations, $60,000. We would also add back any depletion and amortization expenses because they are non-cash expenses, similar to depreciation.

Gains and Losses on the Disposal of Long-term Assets

Disposals of long-term assets such as land and buildings are investing activities, and these disposals usually create a gain or a loss. The gain or loss is included in net income, which is already in the operating activities section of the statement of cash flows. The gain or loss must be removed from net income on the statement of cash flows so the total cash receipts from the sale of the asset can be shown in the investing activities section.

Exhibit 14-4, ShopMart's income statement, includes a gain on disposal of plant assets. During 2018, ShopMart sold equipment, and there was a gain of $10,000 on the sale. The gain was included in the calculation of net income on the income statement, so the gain must be removed from operating cash flows. The gain increased net income, so it is subtracted in the operating activities section.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 20,000	
Gain on Disposal of Plant Assets	(10,000)	

On the other hand, a loss on the disposal of plant assets would decrease net income on the income statement, so the amount of the loss would be reversed to determine the net cash provided by operating activities on the statement of cash flows. For example, a $5,000 loss on disposal of plant assets would be a $5,000 addition to net income on the statement of cash flows to determine net cash provided by operating activities.

What if there is a loss on disposal of plant assets?

Changes in Current Assets and Current Liabilities

Most current assets and current liabilities result from operating activities. For example:

- Accounts receivable result from sales.
- Merchandise inventory relates to cost of goods sold, and so on.

Changes in the current asset and current liability accounts create adjustments to net income on the statement of cash flows, as follows:

- **An increase in a current asset other than cash causes a decrease adjustment to net income.** If Accounts Receivable, Merchandise Inventory, or Prepaid Expenses increases, then the adjustment to net income is a decrease. For example, ShopMart's balance sheet in Exhibit 14-3 shows that Accounts Receivable increased by $17,000. Accounts Receivable is increased when the company makes sales on account and decreases when the company collects cash from customers. Therefore, there were more sales on account (revenue earned and reported on the income statement) than cash collections, the amount we want to reflect on the statement of cash flows. Because the indirect method of accounting for operating activities begins with net income, subtract the $17,000 increase in the current asset Accounts Receivable to adjust accrual-based net income to net cash flows provided by operating activities.
- **A decrease in a current asset other than cash causes an increase adjustment to net income.** Decreases in current assets will have the opposite effect as illustrated above. ShopMart's Merchandise Inventory decreased by $2,000. What caused the decrease? ShopMart must have sold more merchandise inventory than it purchased. Therefore, we add the decrease in Merchandise Inventory of $2,000 to net income on the statement of cash flows.
- **An increase in a current liability causes an increase adjustment to net income.** ShopMart's Accounts Payable increased by $40,000. This means there were more purchases on account than cash paid for the purchases, resulting in an increase to the liability. Accordingly, even though net income was reduced by the expense, cash was not reduced as much. Therefore, an increase in a current liability is *added* to net income in the statement of cash flows.

- **A decrease in a current liability causes a decrease adjustment to net income.** Decreases in current liabilities have the opposite effect of increases. The payments of the current liabilities were more than the accrual of the expenses. Therefore, we subtract decreases in current liabilities from net income to get net cash flow from operating activities. ShopMart's Accrued Liabilities decreased by $5,000. That change shows up as a $5,000 decrease adjustment to net income.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 20,000	
Gain on Disposal of Plant Assets	(10,000)	
Increase in Accounts Receivable	(17,000)	
Decrease in Merchandise Inventory	2,000	
Increase in Accounts Payable	40,000	
Decrease in Accrued Liabilities	(5,000)	30,000

DECISIONS

What can be done to create a positive cash flow?

Meggie Mohamed, CEO, knew that the bank would carefully review her company's most recent statement of cash flows before determining if it would approve the loan needed for expansion. The bank loan officer had told her that it is important that the business show strong operating cash flows. Meggie knows that her company's operating cash flow for this past quarter will most likely be negative. Although the company recorded significant revenue, most of the revenue was recorded as receivables. Meggie expects that the cash will come in soon, but not in time to report a positive operating cash flow. What should Meggie do? What would you do?

Solution

Meggie could explain to the bank officer that her company is expecting to collect a significant amount of cash in the near future on outstanding receivables. She could provide detailed collection information including the estimated time frame of collection and the amount expected. Meggie also has another option. She could look into selling the receivables to another business, often called a factor. By selling the receivables, the company will be able to decrease its accounts receivable balance, increase its cash balance, and report a positive balance in operating cash flows.

Evaluating Cash Flows from Operating Activities

During 2018, ShopMart's operating activities provided a net cash inflow of $70,000 ($40,000 + $30,000), so the amount is labeled Net Cash *Provided by* Operating Activities. If this amount were a net cash outflow, ShopMart would report Net Cash *Used for* Operating Activities.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 20,000	
Gain on Disposal of Plant Assets	(10,000)	
Increase in Accounts Receivable	(17,000)	
Decrease in Merchandise Inventory	2,000	
Increase in Accounts Payable	40,000	
Decrease in Accrued Liabilities	(5,000)	30,000
Net Cash Provided by Operating Activities		70,000

The operating activities section (indirect method) always starts with accrual basis net income. Adjustments are then made to determine the cash basis net income. Exhibit 14-6 summarizes the adjustments made to reconcile net income to net cash provided by operating activities.

Exhibit 14-6 | **Adjustments Made to Reconcile Net Income to Net Cash Provided by Operating Activities**

Item	Adjustment to Net Income on Statement of Cash Flows
Depreciation, Depletion, and Amortization Expense	Increase
Gains on Disposal of Long-term Assets	Decrease
Losses on Disposal of Long-term Assets	Increase
Increases in Current Assets other than Cash	Decrease
Decreases in Current Assets other than Cash	Increase
Increases in Current Liabilities	Increase
Decreases in Current Liabilities	Decrease

Cash Flows from Investing Activities

Investing activities affect long-term assets, such as Plant Assets, Investments, and Notes Receivable. These are shown on ShopMart's balance sheet (Exhibit 14-3). Now, let's see how to compute the investing cash flows.

When computing investing cash flows, it is helpful to evaluate the T-accounts for each long-term asset. The T-account will show if there was an acquisition or disposal that

happened during the year. Let's look at the Plant Assets and Accumulated Depreciation accounts for ShopMart.

Plant Assets

12/31/2017	252,000		
Acquisitions	310,000	55,000	Disposals
12/31/2018	507,000		

Accumulated Depreciation—Plant Assets

		42,000	12/31/2017
Disposals	15,000	20,000	Depr. Exp.
		47,000	12/31/2018

Depreciation Expense is from the income statement.

The beginning and ending balances for each account are taken directly from the comparative balance sheet. Depreciation expense has been included in the Accumulated Depreciation account, and this was taken from the income statement. The acquisition and disposal information came from the additional information provided when we introduced the example:

- Purchased $310,000 in plant assets by paying cash.
- Sold plant assets with a cost of $55,000 and accumulated depreciation of $15,000, yielding a gain of $10,000.

We now know that ShopMart paid $310,000 cash to purchase plant assets. This item is listed first in the investing activities section and shown as an outflow of cash, as indicated by the parentheses.

Next we need to determine the amount of cash received for the disposal of plant assets. Using the information provided, we can recreate the journal entry for the disposal and solve for the missing cash amount.

A↑	=	L	+	E↑
Cash↑ Accumulated Depreciation↓ Plant Assets↓				Gain on Disposal↑

Date	Accounts and Explanation	Debit	Credit
	Cash	?	
	Accumulated Depreciation—Plant Assets	15,000	
	Gain on Disposal of Plant Assets		10,000
	Plant Assets		55,000

We compute the cash receipt from the disposal as follows:

$$\begin{aligned}\text{Cash received} &= \text{Cost} - \text{Accumulated Depreciation} + \text{Gain} - \text{Loss}\\ &= \$55{,}000 - \$15{,}000 + \$10{,}000\\ &= \$50{,}000\end{aligned}$$

The cash receipt from the sale of plant assets of $50,000 is shown next in the investing activities section. As there are no other changes to long-term assets, the net cash from investing activities is determined. Notice that this is a net cash outflow, as indicated by the parentheses, and is reported as Net Cash *Used for* Investing Activities.

In this partial statement, we are showing only the investing activities section of the statement of cash flows. Remember that the investing activities section is reported after the operating activities section.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Investing Activities:		
Cash Payment for Acquisition of Plant Assets	(310,000)	
Cash Receipt from Disposal of Plant Assets	50,000	
Net Cash Used for Investing Activities		(260,000)

Cash Flows from Financing Activities

Financing activities affect the long-term liability and equity accounts, such as Long-term Notes Payable, Bonds Payable, Common Stock, and Retained Earnings. To determine the cash flows from financing activities, we need to review each of these account types.

Long-term Liabilities

The T-account for ShopMart's Notes Payable is shown below. Additional information concerning notes payable is also provided by the company as follows:

- Received $90,000 cash from issuance of notes payable.
- Paid $10,000 cash to retire notes payable.

Notes Payable			
		80,000	12/31/2017
Payment	10,000	90,000	Issuance
		160,000	12/31/2018

The beginning and ending balances of Notes Payable are taken from the comparative balance sheet. For ShopMart, a new issuance of notes payable is known to be a $90,000 cash receipt and is shown by the following journal entry:

Date	Accounts and Explanation	Debit	Credit
	Cash	90,000	
	Notes Payable		90,000

A↑ = L↑ + E
Cash↑ = Notes Payable↑

In addition, ShopMart paid $10,000 cash to retire notes payable.

Date	Accounts and Explanation	Debit	Credit
	Notes Payable	10,000	
	Cash		10,000

A↓ = L↓ + E
Cash↓ = Notes Payable↓

The cash inflow and cash outflow associated with these notes payable are listed first in the cash flows from financing activities section.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Cash Flows from Financing Activities:	
Cash Receipt from Issuance of Notes Payable	90,000
Cash Payment of Notes Payable	(10,000)

Common Stock and Treasury Stock

Cash flows for financing activities are also determined by analyzing the stock accounts. For example, the amount of new issuances of stock is determined by analyzing the stock accounts and reviewing the additional information provided:

- Received $120,000 cash from issuing shares of common stock.
- Paid $20,000 cash for purchase of shares of treasury stock.

ShopMart's stock T-accounts are as follows:

Common Stock

		250,000	12/31/2017
Retirement	0	120,000	Issuance
		370,000	12/31/2018

Treasury Stock

12/31/2017	0		
Purchase	20,000	0	Disposal
12/31/2018	20,000		

The common stock account shows a new stock issuance of $120,000 and would be recorded by the following journal entry:

A↑ = L + E↑

Cash↑ = Common Stock↑

Date	Accounts and Explanation	Debit	Credit
	Cash	120,000	
	Common Stock		120,000

This is shown as $120,000 cash inflow in the financing activities section of the statement.

Treasury stock also changed on ShopMart's balance sheet. The T-account is showing an acquisition of treasury stock that would be recorded as follows:

A↓ = L + E↓

Cash↓ = Treasury Stock↑

Date	Accounts and Explanation	Debit	Credit
	Treasury Stock	20,000	
	Cash		20,000

The $20,000 is shown as a cash outflow in the financing section of the statement of cash flows for the purchase of treasury stock.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Cash Flows from Financing Activities:	
Cash Receipt from Issuance of Notes Payable	90,000
Cash Payment of Notes Payable	(10,000)
Cash Receipt from Issuance of Common Stock	120,000
Cash Payment for Purchase of Treasury Stock	(20,000)

Computing Dividend Payments

The amount of dividend payments can be computed by analyzing the Retained Earnings account. First, we input the balances from the balance sheet:

Retained Earnings

		80,000	12/31/2017
Net Loss	?	?	Net Income
Dividends	?		
		110,000	12/31/2018

Retained Earnings increases when companies earn net income. Retained Earnings decreases when companies have a net loss and when they declare dividends. We know that ShopMart earned net income of $40,000 from the income statement in Exhibit 14-4.

Retained Earnings

		80,000	12/31/2017
Net Loss	?	40,000	Net Income
Dividends	?		
		110,000	12/31/2018

Net Income is from the income statement.

ShopMart can't have both net income and net loss for the same period; therefore, the missing value must be the amount of dividends ShopMart declared. Solving for the dividends follows:

$$\begin{aligned}
\text{Ending Retained Earnings} &= \text{Beginning Retained Earnings} + \text{Net income} - \text{Net loss} - \text{Dividends} \\
\$110{,}000 &= \$80{,}000 + \$40{,}000 - \$0 - \text{Dividends} \\
\text{Dividends} &= \$80{,}000 + \$40{,}000 - \$0 - \$110{,}000 \\
\text{Dividends} &= \$10{,}000
\end{aligned}$$

So our final Retained Earnings T-account shows the following:

Retained Earnings

		80,000	12/31/2017
		40,000	Net Income
Dividends	10,000		
		110,000	12/31/2018

In order for the cash dividends to be reported on the statement of cash flows, the company must have paid the dividends. In this case, we know the cash dividends are paid because there are no dividends payable reported on ShopMart's balance sheet. Companies can also distribute stock dividends. A stock dividend has *no* effect on Cash and is *not* reported in the financing activities section of the statement of cash flows. ShopMart had no stock dividends, only cash dividends, which will be shown as an outflow in the financing activities section of the statement of cash flows.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Notes Payable	$ 90,000	
Cash Payment of Notes Payable	(10,000)	
Cash Receipt from Issuance of Common Stock	120,000	
Cash Payment for Purchase of Treasury Stock	(20,000)	
Cash Payment of Dividends	(10,000)	
Net Cash Provided by Financing Activities		170,000

TYING IT ALL TOGETHER

Amazon.com, Inc. opened its virtual doors on the internet in July 1995 and completed an initial public offering in May 1997. The company serves customers through its retail Web sites selling millions of unique products. In addition, the company manufactures and sells electronic devices including Kindle e-readers and Fire tablets. Amazon.com also offers Amazon Prime, a membership program that includes unlimited free shipping on items and access to unlimited streaming of movies and TV episodes. (You can find Amazon.com, Inc.'s annual report at http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-reportsAnnual)

What format does Amazon.com, Inc. use for its statement of cash flows?

Amazon.com, Inc. uses an indirect method statement of cash flows. This method starts with net income and adjusts net income to net cash provided by operating activities.

On Amazon.com, Inc.'s statement of cash flows, the company reports cash provided by operating activities for the year ended December 31, 2015, of $11,920 million. What were the operating cash flows a result of?

Cash flows from operating activities reports on activities that create revenue or expense in the company's business. This section reflects the day-to-day operations. Amazon.com reports that the company's operating cash flows result primarily from cash received from customers, advertising agreements, and co-branded credit card agreements. The cash inflows are offset by cash payments for products and services, employee compensation, and interest payments on long-term obligations.

Did Amazon.com, Inc. pay a cash dividend in 2015? How would an investor know?

Amazon.com did not pay a cash dividend in 2015. An investor could easily tell if a company paid a cash dividend by reviewing the financing activities section of the statement of cash flows. This section reports cash inflows and outflows associated with long-term liabilities and equity, including the payment of cash dividends.

Net Change in Cash and Cash Balances

To complete the statement of cash flows, the net change in cash and its effect on the beginning cash balance must be shown. This represents the total change in cash for the period and reconciles the statement of cash flows. First, the net increase or decrease in cash is computed by combining the cash provided by or used for operating, investing, and financing activities. In the case of ShopMart, there is a net decrease in the cash balance of $20,000 for the year and is calculated as follows:

Net increase (decrease) in cash = Net cash provided by operating activities − Net cash used for investing activities + Net cash provided by financing activities
= $70,000 − $260,000 + $170,000
= $(20,000)

Next, the beginning cash from December 31, 2017, is listed at $42,000, as shown on the comparative balance sheet. The net decrease of $20,000 is subtracted from beginning cash of $42,000, which equals the ending cash balance on December 31, 2018, of $22,000. This is the key to the statement of cash flows—it explains why the cash balance for ShopMart decreased by $20,000, even though the company reported net income for the year.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Net Cash Provided by Operating Activities	$ 70,000
Net Cash Used for Investing Activities	(260,000)
Net Cash Provided by Financing Activities	170,000
Net Increase (Decrease) in Cash	(20,000)
Cash Balance, December 31, 2017	42,000
Cash Balance, December 31, 2018	$ 22,000

Before moving on, take a moment to review the completed Statement of Cash Flows shown earlier in Exhibit 14-5.

Non-cash Investing and Financing Activities

The last step in preparing the statement of cash flows is to prepare the non-cash investing and financing activities section. This section appears as a separate schedule of the statement of cash flows or in the notes to the financial statements. Our ShopMart example did not include transactions of this type because the company did not have any non-cash transactions during the year. So, to illustrate them, let's consider three non-cash transactions for another fictitious company, The Outdoors, Inc. How would they be reported? First, we gather the non-cash activities for the company:

1. Acquired $300,000 building by issuing common stock.
2. Acquired $70,000 land by issuing notes payable.
3. Retired $100,000 notes payable by issuing common stock.

Now, we consider each transaction individually.

1. The Outdoors issued common stock of $300,000 to acquire a building. The journal entry to record the purchase would be as follows:

A↑ = L + E↑
Building↑ = Common Stock↑

Date	Accounts and Explanation	Debit	Credit
	Building	300,000	
	Common Stock		300,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the building and the common stock are important. The purchase of the building is an investing activity. The issuance of common stock is a financing activity. Taken together, this transaction is a *non-cash investing and financing activity*.

2. The second transaction listed indicates that The Outdoors acquired $70,000 of land by issuing a note. The journal entry to record the purchase would be as follows:

A↑ = L↑ + E
Land↑ = Notes Payable↑

Date	Accounts and Explanation	Debit	Credit
	Land	70,000	
	Notes Payable		70,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the land and the notes payable are important. The purchase of the land is an investing activity. The issuance of the note is a financing activity. Taken together, this transaction is a *non-cash investing and financing activity.*

3. The third transaction listed indicates that The Outdoors retired $100,000 of debt by issuing common stock. The journal entry to record the transaction would be as follows:

A = L↓ + E↑
Notes Payable↓ Common Stock↑

Date	Accounts and Explanation	Debit	Credit
	Notes Payable	100,000	
	Common Stock		100,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the notes payable and the stock issuance are important. The retirement of the note and the issuance of the common stock are both financing activities. Taken together, this transaction, even though it is two financing transactions, is reported in the *non-cash investing and financing activities.*

Non-cash investing and financing activities are reported in a separate part of the statement of cash flows. Exhibit 14-7 illustrates non-cash investing and financing activities for The Outdoors. This information is either reported as a separate schedule following the statement of cash flows or can be disclosed in a note.

Exhibit 14-7 | **Non-cash Investing and Financing Activities**

THE OUTDOORS, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Non-cash Investing and Financing Activities:	
Acquisition of building by issuing common stock	$ 300,000
Acquisition of land by issuing notes payable	70,000
Retirement of notes payable by issuing common stock	100,000
Total Non-cash Investing and Financing Activities	$ 470,000

Try It!

6. Owl, Inc.'s accountants have assembled the following data for the year ended December 31, 2018:

Cash receipt from sale of equipment	$ 20,000
Depreciation expense	12,000
Cash payment of dividends	4,000
Cash receipt from issuance of common stock	12,000
Net income	30,000
Cash purchase of land	25,000
Increase in current liabilities	10,000
Decrease in current assets other than cash	8,000

Prepare Owl's statement of cash flows using the indirect method for the year ended December 31, 2018. Assume beginning and ending Cash are $12,000 and $75,000 respectively.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S14-3 through S14-9. MyAccountingLab

HOW DO WE USE FREE CASH FLOW TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 3
Use free cash flow to evaluate business performance

Throughout this chapter, we have focused on cash flows from operating, investing, and financing activities. Some investors want to know how much cash a company can "free up" for new opportunities. **Free cash flow** is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying cash dividends to shareholders. Free cash flow can be computed as follows:

Free cash flow = Net cash provided by operating activities − Cash payments planned for investments in long-term assets − Cash dividends

Free Cash Flow
The amount of cash available from operating activities after paying for planned investments in long-term assets and after paying dividends to shareholders. Net cash provided by operating activities − Cash payments planned for investments in long-term assets − Cash dividends.

Many companies use free cash flow to estimate the amount of cash that would be available for unexpected opportunities. Suppose ShopMart expects net cash provided by operations of $200,000. Assume the company plans to spend $160,000 to modernize its retail facilities and pays $15,000 in cash dividends. In this case, ShopMart's free cash flow would be $25,000 ($200,000 − $160,000 − $15,000). If a good investment opportunity comes along, the company should have $25,000 cash available to invest.

Try It!

7. Kalapono Company expects the following for 2018:

- Net cash provided by operating activities of $100,000.
- Net cash provided by financing activities of $10,000.
- Net cash used for investing activities of $20,000 (no sales of long-term assets).
- Cash dividends paid to stockholders was $2,000.

How much free cash flow does Kalapono expect for 2018?

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S14-10. MyAccountingLab

APPENDIX 14A: Preparing the Statement of Cash Flows by the Direct Method

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE DIRECT METHOD?

Learning Objective 4
Prepare the statement of cash flows by the direct method

The Financial Accounting Standards Board (FASB) prefers the direct method of reporting cash flows from operating activities. The direct method provides clearer information about the sources and uses of cash than does the indirect method. However, very few non-public companies use the direct method because it takes more computations than the indirect method. Investing and financing cash flows are exactly the same presentation under both direct and indirect methods. Because only the preparation of the operating activities section differs, it is all we discuss in this appendix.

To illustrate how the operating activities section of the statement of cash flows differs for the direct method, we use the ShopMart data we used within the main chapter.

Cash Flows from Operating Activities

In the indirect method, we start with accrual basis net income and then adjust it to cash basis through a series of adjusting items. When using the direct method, we take each line item of the income statement and convert it from accrual to cash basis. So, in essence, the operating activities section of the direct-method cash flows statement is really just a cash-basis income statement. Now let's apply this information to ShopMart.

Cash Collections from Customers

The first item on the income statement shown in Exhibit 14-4 is Net Sales Revenue. Net Sales Revenue represents the total of all sales, whether for cash or on account. The balance sheet account related to Net Sales Revenue is Accounts Receivable. Accounts Receivable

went from $73,000 at December 31, 2017, to $90,000 at December 31, 2018, an increase of $17,000. Net Sales Revenue can be converted to cash receipts from customers as follows:

Cash receipts from customers = Net Sales Revenue + Beginning Accounts Receivable − Ending Accounts Receivable
= $286,000 + $73,000 − $90,000
= $269,000

The increase in Accounts Receivable represents the net amount of sales on account not collected from customers.

Accounts Receivable

12/31/2017	73,000	
Increase	17,000	
12/31/2018	90,000	

Sales Revenue

	286,000

When a company records a credit to Sales Revenue, it either debits Cash or debits Accounts Receivable.

So, the cash ShopMart received from customers is $269,000. This is the first item in the operating activities section of the direct-method statement of cash flows.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	$ 269,000

Had ShopMart had a decrease in Accounts Receivable, the amount of cash collections from customers would be higher than Net Sales Revenue.

Cash Receipts of Interest Revenue

The income statement reports interest revenue of $12,000. The balance sheet account related to Interest Revenue is Interest Receivable. Because there is no Interest Receivable account on the balance sheet, the interest revenue must have all been received in cash. So, the statement of cash flows shows interest received of $12,000.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	$ 269,000
Interest Revenue Received	12,000

Cash Receipts of Dividend Revenue

The income statement reports dividend revenue of $9,000. The balance sheet account related to Dividend Revenue is Dividends Receivable. As with the interest, there is no Dividends Receivable account on the balance sheet. Therefore, the dividend revenue must have all been received in cash. So, the statement of cash flows shows cash received from dividends of $9,000.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 269,000	
Interest Revenue Received	12,000	
Dividends Received on Investments	9,000	
Total Cash Receipts		$ 290,000

Payments to Suppliers

Payments to suppliers include all payments for the following:

- Merchandise inventory
- Operating expenses except employee compensation, interest, and income taxes

Suppliers, also called *vendors*, are those entities that provide the business with its merchandise inventory and essential services. The accounts related to supplier payments for merchandise inventory are Cost of Goods Sold, Merchandise Inventory, and Accounts Payable. Cost of Goods Sold on the income statement was $156,000. Merchandise Inventory decreased from $145,000 at December 31, 2017, to $143,000 at December 31, 2018. Accounts Payable increased from $50,000 at December 31, 2017, to $90,000 at December 31, 2018. We can calculate the cash paid for inventory as follows:

Cash paid for merchandise inventory = Cost of Goods Sold − Beginning Merchandise Inventory + Ending Merchandise Inventory + Beginning Accounts Payable − Ending Accounts Payable
= $156,000 − $145,000 + $143,000 + $50,000 − $90,000
= $114,000

When a company records a debit to Merchandise Inventory, it either credits Cash or credits Accounts Payable.

Merchandise Inventory

12/31/2017	145,000		
Purchased	154,000	156,000	Sold
12/31/2018	143,000		

Accounts Payable

		50,000	12/31/2017
		40,000	Increase
		90,000	12/31/2018

The increase in Accounts Payable represents the net amount of Merchandise Inventory that was purchased on account but not yet paid.

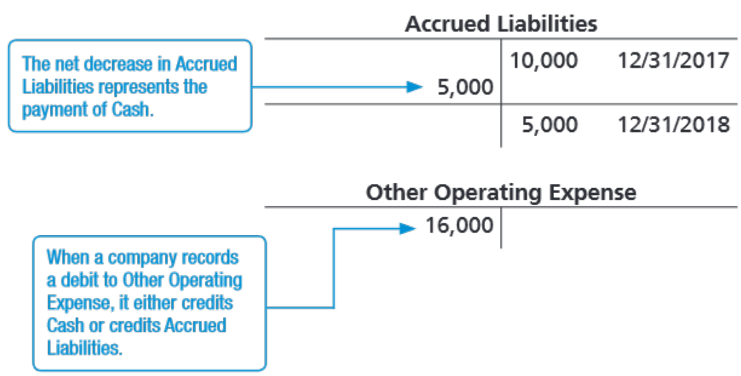
Cost of Goods Sold

Sold	156,000		

APPENDIX 14A

The accounts related to supplier payments for operating expenses are Other Operating Expense and Accrued Liabilities. Other operating expenses on the income statement were $16,000. Accrued Liabilities decreased from $10,000 at December 31, 2017, to $5,000 at December 31, 2018. Cash paid for operating expenses can be calculated as follows:

Cash paid for other operating expenses = Other Operating Expense + Beginning Accrued Liabilities − Ending Accrued Liabilities
= $16,000 + $10,000 − $5,000
= $21,000



Adding the cash paid for merchandise inventory and the cash paid for other operating expenses together, we get total cash paid to suppliers of $135,000 ($114,000 + $21,000).

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 269,000	
Interest Revenue Received	12,000	
Dividends Received on Investments	9,000	
Total Cash Receipts		$ 290,000
Payments:		
To Suppliers	(135,000)	

Payments to Employees

This category includes payments for salaries, wages, and other forms of employee compensation. Accrued amounts are not cash flows because they have not yet been paid. The accounts related to employee payments are Salaries and Wages Expense from the income statement and Salaries and Wages Payable from the balance sheet. Because there is not a Salaries and Wages Payable account on the balance sheet, the Salaries and Wages Expense account must represent all amounts paid in cash to employees. So, the statement of cash flows shows cash payments to employees of $56,000.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 269,000	
Interest Revenue Received	12,000	
Dividends Received on Investments	9,000	
Total Cash Receipts		$ 290,000
Payments:		
To Suppliers	(135,000)	
To Employees	(56,000)	

Payments for Interest Expense and Income Tax Expense

These cash payments are reported separately from the other expenses. The accounts related to interest payments are Interest Expense from the income statement and Interest Payable from the balance sheet. Because there is no Interest Payable account on the balance sheet, the Interest Expense account from the income statement must represent all amounts paid in cash for interest. So, the statement of cash flows shows cash payments for interest of $15,000.

The accounts related to income tax payments are Income Tax Expense from the income statement and Income Tax Payable from the balance sheet. Because there is no Income Tax Payable account on the balance sheet, the Income Tax Expense account from the income statement must represent all amounts paid in cash for income tax. So, the statement of cash flows shows cash payments for income tax of $14,000.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 269,000	
Interest Revenue Received	12,000	
Dividends Received on Investments	9,000	
Total Cash Receipts		$ 290,000
Payments:		
To Suppliers	(135,000)	
To Employees	(56,000)	
For Interest	(15,000)	
For Income Tax	(14,000)	
Total Cash Payments		(220,000)

Are depreciation expense and gain or loss on disposal of plant assets included in the operating activities section when using the direct method?

Non-cash Expenses and Gains or Losses on Disposal of Long-term Assets

Non-cash expenses and gains or losses on disposal of long-term assets are reported on the income statement but are not included in the operating activities when using the direct method. Non-cash expenses are not reported because these items do not affect

APPENDIX 14A

cash. The cash received from the disposal of long-term assets is reported in the investing activities section, not the operating activities section.

Net Cash Provided by Operating Activities

To calculate net cash provided by operating activities using the direct method, we add all the cash receipts and cash payments described previously and find the difference. For ShopMart, total cash receipts were $290,000. Total cash payments were $220,000. So, net cash provided by operating activities is $70,000. If you refer back to the indirect method statement of cash flows shown in Exhibit 14-5, you will find that it showed the same $70,000 for net cash provided by operating activities. The amount is the same, only the method by which it was calculated was different.

The remainder of ShopMart's statement of cash flows is exactly the same as what we calculated using the indirect method. Exhibit 14A-1 shows the completed statement of cash flows using the direct method for operating activities.

Exhibit 14A-1 | **Statement of Cash Flows—Direct Method**

SHOPMART, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 269,000	
Interest Revenue Received	12,000	
Dividends Received on Investments	9,000	
Total Cash Receipts		$ 290,000
Payments:		
To Suppliers	(135,000)	
To Employees	(56,000)	
For Interest	(15,000)	
For Income Tax	(14,000)	
Total Cash Payments		(220,000)
Net Cash Provided by Operating Activities		70,000
Cash Flows from Investing Activities:		
Cash Payment for Acquisition of Plant Assets	(310,000)	
Cash Receipt from Disposal of Plant Assets	50,000	
Net Cash Used for Investing Activities		(260,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Notes Payable	90,000	
Cash Payment of Notes Payable	(10,000)	
Cash Receipt from Issuance of Common Stock	120,000	
Cash Payment for Purchase of Treasury Stock	(20,000)	
Cash Payment of Dividends	(10,000)	
Net Cash Provided by Financing Activities		170,000
Net Increase (Decrease) in Cash		(20,000)
Cash Balance, December 31, 2017		42,000
Cash Balance, December 31, 2018		$ 22,000

Try It!

8A. Big Island, Inc. began 2018 with cash of $40,000. During the year, Big Island earned revenue of $200,000 and collected $120,000 from customers. Expenses for the year totaled $160,000, of which Big Island paid $65,000 in cash to suppliers and $80,000 in cash to employees. The company received $2,000 cash for interest revenue and paid $10,000 for income taxes. Big Island also paid $35,000 to purchase equipment and a cash dividend of $15,000 to its stockholders during 2018. Prepare the company's operating activities section of the statement of cash flows for the year ended December 31, 2018. Use the direct method.

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S14A-11 through Short Exercises S14A-14. MyAccountingLab

APPENDIX 14B: Preparing the Indirect Statement of Cash Flows Using a Spreadsheet

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE INDIRECT METHOD AND A SPREADSHEET?

Learning Objective 5

Prepare the statement of cash flows by the indirect method using a spreadsheet

This chapter discussed the uses of the statement of cash flows in decision making and showed how to prepare the statement using T-accounts. The T-account approach works well as a learning device. In practice, however, most companies face complex situations. In these cases, a spreadsheet can help in preparing the statement of cash flows.

The spreadsheet starts with the beginning balance sheet and concludes with the ending balance sheet. Two middle columns—one for debit amounts and the other for credit amounts—complete the spreadsheet. These columns, labeled "Transaction Analysis," hold the data for the statement of cash flows. Accountants can prepare the statement directly from the lower part of the spreadsheet. This appendix is based on the ShopMart data used in this chapter. We illustrate this approach only with the indirect method for operating activities. This method could be used for the direct method as well.

The *indirect* method reconciles accrual basis net income to net cash provided by operating activities. Exhibit 14B-1 is the spreadsheet for preparing the statement of cash flows by the *indirect* method. Panel A shows the transaction analysis, and Panel B gives the information to prepare the statement of cash flows.

Exhibit 14B-1 **Spreadsheet for Statement of Cash Flows—Indirect Method**

	A	B	C	D	E	F	G
1	**SHOPMART, INC.**						
2	**Spreadsheet for Statement of Cash Flows**						
3	**Year Ended December 31, 2018**						
4							
5	**Panel A—Balance Sheet:**	**Balance**		**Transaction Analysis**			**Balance**
6		**12/31/2017**		**DEBIT**	**CREDIT**		**12/31/2018**
7	Cash	$ 42,000			20,000	(n)	$ 22,000
8	Accounts Receivable	73,000	(d)	17,000			90,000
9	Merchandise Inventory	145,000			2,000	(e)	143,000
10	Plant Assets	252,000	(h)	310,000	55,000	(c)	507,000
11	Accumulated Depreciation—Plant Assets	(42,000)	(c)	15,000	20,000	(b)	(47,000)
12	Total Assets	**$ 470,000**					**$ 715,000**
13							
14	Accounts Payable	50,000			40,000	(f)	90,000
15	Accured Liabilities	10,000	(g)	5,000			5,000
16	Notes Payable	80,000	(j)	10,000	90,000	(i)	160,000
17	Total Liabilities	140,000					255,000
18							
19	Common Stock, no par	250,000			120,000	(k)	370,000
20	Retained Earnings	80,000	(m)	10,000	40,000	(a)	110,000
21	Treasury Stock	0	(l)	20,000			(20,000)
22	Total Liabilities and Stockholders' Equity	**$ 470,000**		**$ 387,000**	**$ 387,000**		**$ 715,000**
23							
24	**Panel B—Statement of Cash Flows:**						
25	Cash Flows from Operating Activities:						
26	Net Income		(a)	40,000			
27	Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:						
28	Depreciation Expense—Plant Assets		(b)	20,000			
29	Gain on Disposal of Plant Assets				10,000	(c)	
30	Increase in Accounts Receivable				17,000	(d)	
31	Decrease in Merchandise Inventory		(e)	2,000			
32	Increase in Accounts Payable		(f)	40,000			
33	Decrease in Accrued Liabilities				5,000	(g)	
34	Net Cash Provided by Operating Activities						
35	Cash Flows from Investing Activities:						
36	Cash Payment for Acquisition of Plant Assets				310,000	(h)	
37	Cash Receipt from Disposal of Plant Assets		(c)	50,000			
38	Net Cash Used for Investing Activities						
39	Cash Flows from Financing Activities:						
40	Cash Receipt from Issuance of Notes Payable		(i)	90,000			
41	Cash Payment of Notes Payable				10,000	(j)	
42	Cash Receipt from Issuance of Common Stock		(k)	120,000			
43	Cash Payment for Purchase of Treasury Stock				20,000	(l)	
44	Cash Payment of Dividends				10,000	(m)	
45	Net Cash Provided by Financing Activities						
46	Net Increase (Decrease) in Cash		(n)	20,000			
47	**Total**			**$ 382,000**	**$ 382,000**		
48							

The following is a listing of the transaction analysis provided on the spreadsheet using the indirect method:

a. Net income of $40,000 is the first operating cash inflow. Net income is entered on the spreadsheet (Panel B) as a debit to Net Income under Cash Flows from Operating Activities and as a credit to Retained Earnings on the balance sheet (Panel A).

b. Next come the adjustments to net income, starting with depreciation of $20,000—transaction (b)—which is debited to Depreciation Expense—Plant Assets and credited to Accumulated Depreciation—Plant Assets.

APPENDIX 14B

c. This transaction is the sale of plant assets. The $10,000 gain on the sale is entered as a credit to Gain on Disposal of Plant Assets—a subtraction from net income—under operating cash flows. This credit removes the $10,000 gain from operating activities because the cash proceeds from the sale were $50,000, not $10,000. The $50,000 sale amount is then entered on the spreadsheet under investing activities. Entry (c) is completed by crediting the plant assets' cost of $55,000 to the Plant Assets account and debiting Accumulated Depreciation—Plant Assets for $15,000.

d. Entry (d) debits Accounts Receivable for its $17,000 increase during the year. This amount is credited to Increase in Accounts Receivable under operating cash flows.

e. This entry credits Merchandise Inventory for its $2,000 decrease during the year. This amount is debited to Decrease in Merchandise Inventory under operating cash flows.

f. This entry credits Accounts Payable for its $40,000 increase during the year. Then it is debited to show as Increase in Accounts Payable under operating cash flows.

g. This entry debits Accrued Liabilities for its $5,000 decrease during the year. Then it is credited to show as Decrease in Accrued Liabilities under operating cash flows.

h. This entry debits Plant Assets for the purchase of $310,000 and credits Cash Payment for Acquisition of Plant Assets under investing cash flows.

i. This entry is represented by a credit to Notes Payable and a debit under cash flows from financing activities of $90,000 (Cash Receipt from Issuance of Notes Payable).

j. This entry is the opposite of (i). It is represented by a debit (reduction) of $10,000 to Notes Payable and a credit under Cash Flows from Financing Activities for Cash Payment of Notes Payable.

k. This entry debits Cash Receipts from Issuance of Common Stock of $120,000 under financing cash flows. The offsetting credit is to Common Stock.

l. The purchase of treasury stock debited the Treasury Stock account on the balance sheet $20,000. The corresponding cash flow entry Cash Payment for Purchase of Treasury Stock credits $20,000 to reduce cash flow.

m. The $10,000 reduction (debit) to the Retained Earnings account is the result of dividends declared and paid by the company. So, we show Cash Payment of Dividends as a credit in the financing section.

n. The final item in Exhibit 14B-1 is the Net Increase (Decrease) in Cash. It is shown as a credit to Cash and a debit to Net Increase (Decrease) in Cash of $20,000.

In Panel B of Exhibit 14B-1, the debits represent increases (or inflows) of cash and the credits represent decreases (or outflows). This is because debits increase Cash and credits decrease Cash.

Try It!

9B. Muench, Inc.'s accountant has partially completed the spreadsheet for the statement of cash flows. Fill in the remaining missing information.

	A	B	C	D	E	F	G
1	**MUENCH, INC.**						
2	**Spreadsheet for Statement of Cash Flows**						
3	**Year Ended December 31, 2018**						
4							
5	**Panel A—Balance Sheet:**	**Balance 12/31/2017**		**Transaction Analysis**			**Balance 12/31/2018**
6				**DEBIT**	**CREDIT**		
7	Cash	$ 16,000					$ 20,000
8	Accounts Receivable	3,250					5,000
9	Plant Assets	14,000		1,000			15,000
10	Accumulated Depreciation	(100)			100		(200)
11	Total Assets	**$ 33,150**					**$ 39,800**
12							
13	Accounts Payable	5,000					3,500
14							
15	Common Stock, no par	24,150			5,850		30,000
16	Retained Earnings	4,000		5,700			6,300
17	Total Liabilities and Stockholders' Equity	**$ 33,150**					**$ 39,800**
18							
19	**Panel B—Statement of Cash Flows:**						
20	Cash Flows from Operating Activities:						
21	Net Income						
22	Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:						
23	Depreciation Expense—Plant Assets			100			
24	Increase in Accounts Receivable						
25	Decrease in Accounts Payable						
26	Net Cash Provided by Operating Activities						
27	Cash Flows from Investing Activities:						
28	Cash Payment for Acquisition of Plant Assets				1,000		
29	Net Cash Used for Investing Activities						
30	Cash Flows from Financing Activities:						
31	Cash Receipt from Issuance of Common Stock			5,850			
32	Cash Payment of Dividends				5,700		
33	Net Cash Provided by Financing Activities						
34	Net Increase (Decrease) in Cash						
35							

Check your answer online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S14B-15. MyAccountingLab

REVIEW

> Things You Should Know

1. What is the statement of cash flows?

- The statement of cash flows reports on a business's cash receipts and cash payments for a specific period.
- There are three basic types of cash flow activities:
  - Operating activities—Reports on activities that create revenue or expense in the entity's business.
  - Investing activities—Reports cash receipts and cash payments that increase or decrease long-term assets.
  - Financing activities—Includes cash receipts and cash payments involved in long-term liabilities and equity.
- Non-cash investing and financing activities are not included in the statement of cash flows but appear either as a separate schedule at the bottom of the statement or in the notes to the financial statements.
- There are two ways to format operating activities on the statement of cash flows:
  - Indirect method—Starts with net income and adjusts it to net cash provided by operating activities.
  - Direct method—Restates the income statement in terms of cash.

2. How is the statement of cash flows prepared using the indirect method?

- **Step 1:** Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also adjust for gains or losses on long-term assets and non-cash expenses.
- **Step 2:** Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.
- **Step 3:** Complete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.
- **Step 4:** Compute the net increase or decrease in cash during the year.
- **Step 5:** Prepare a separate schedule reporting any non-cash investing and financing activities.

3. How do we use free cash flow to evaluate business performance?

- Free cash flow is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying cash dividends to shareholders.
- Free cash flow = Net cash provided by operating activities − Cash payments planned for investments in long-term assets − Cash dividends.

4. How is the statement of cash flows prepared using the direct method? (Appendix 14A)

- The operating activities section is the only section that differs between the direct and indirect methods.
- When using the direct method, each line item on the income statement is converted from accrual basis to cash basis.

5. How is the statement of cash flows prepared using the indirect method and a spreadsheet? (Appendix 14B)

- A spreadsheet can be used to help in preparing the statement of cash flows.
- The spreadsheet helps accountants analyze the changes in balance sheet accounts.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The Adams Corporation reported the following income statement for 2018 and comparative balance sheet for 2018 and 2017, along with transaction data for 2018:

ADAMS CORPORATION
Comparative Balance Sheet
December 31, 2018 and 2017

	2018	2017	Increase (Decrease)
Assets			
Current Assets:			
Cash	$ 22,000	$ 3,000	$ 19,000
Accounts Receivable	22,000	23,000	(1,000)
Merchandise Inventory	35,000	34,000	1,000
Long-term Assets:			
Plants Assets	153,200	97,200	56,000
Accumulated Depreciation—Plant Assets	(27,200)	(25,200)	(2,000)
Total Assets	$ 205,000	$ 132,000	$ 73,000
Liabilities			
Current Liabilities:			
Accounts Payable	$ 35,000	$ 26,000	$ 9,000
Accrued Liabilities	7,000	9,000	(2,000)
Income Tax Payable	10,000	10,000	0
Long-term Liabilities:			
Bonds Payable	84,000	53,000	31,000
Total Liabilities	136,000	98,000	38,000
Stockholders' Equity			
Common Stock, no par	52,000	20,000	32,000
Retained Earnings	27,000	19,000	8,000
Treasury Stock	(10,000)	(5,000)	(5,000)
Total Stockholders' Equity	69,000	34,000	35,000
Total Liabilities and Stockholders' Equity	$ 205,000	$ 132,000	$ 73,000

CHAPTER 14

ADAMS CORPORATION Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 662,000
Cost of Goods Sold		560,000
Gross Profit		102,000
Operating Expenses:		
Salaries and Wages Expense	$ 46,000	
Depreciation Expense—Plant Assets	10,000	
Rent Expense	2,000	
Total Operating Expenses		58,000
Operating Income		44,000
Other Income and (Expenses):		
Loss on Disposal of Plant Assets	(2,000)	
Total Other Income and (Expenses)		(2,000)
Net Income Before Income Taxes		42,000
Income Tax Expense		16,000
Net Income		$ 26,000

Transaction data for 2018	
Cash paid for purchase of equipment	$140,000
Cash payment of dividends	18,000
Issuance of common stock to retire bonds payable	13,000
Issuance of bonds payable to borrow cash	44,000
Cash receipt from issuance of common stock	19,000
Cash receipt from sale of equipment (Cost, $84,000; Accumulated Depreciation, $8,000)	74,000
Cash paid for purchase of treasury stock	5,000

Prepare Adams Corporation's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the indirect method. (See Learning Objective 2)

> Solution

ADAMS CORPORATION Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 26,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 10,000	
Loss on Disposal of Plant Assets	2,000	
Decrease in Accounts Receivable	1,000	
Increase in Merchandise Inventory	(1,000)	
Increase in Accounts Payable	9,000	
Decrease in Accrued Liabilities	(2,000)	19,000
Net Cash Provided by Operating Activities		45,000
Cash Flows from Investing Activities:		
Cash Payment for Acquisition of Plant Assets	(140,000)	
Cash Receipt from Disposal of Plant Assets	74,000	
Net Cash Used for Investing Activities		(66,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Bonds Payable	44,000	
Cash Receipt from Issuance of Common Stock	19,000	
Cash Payment for Purchase of Treasury Stock	(5,000)	
Cash Payment of Dividends	(18,000)	
Net Cash Provided by Financing Activities		40,000
Net Increase (Decrease) in Cash		19,000
Cash Balance, December 31, 2017		3,000
Cash Balance, December 31, 2018		**$ 22,000**
Non-cash Investing and Financing Activities:		
Issuance of Common Stock to Retire Bonds Payable		$ 13,000
Total Non-cash Investing and Financing Activities		**$ 13,000**

Relevant T-accounts:

Plant Assets

12/31/2017	97,200		
Acquisitions	140,000	84,000	Disposals
12/31/2018	153,200		

Accumulated Depreciation—Plant Assets

		25,200	12/31/2017
Disposals	8,000	10,000	Depr. Exp.
		27,200	12/31/2018

Bonds Payable

		53,000	12/31/2017
Retirement	13,000	44,000	Issuance
		84,000	12/31/2018

Common Stock

		20,000	12/31/2017
Retirement	0	13,000	Issuance
		19,000	Issuance
		52,000	12/31/2018

Treasury Stock

12/31/2017	5,000		
Purchase	5,000	0	Disposal
12/31/2018	10,000		

Retained Earnings

		19,000	12/31/2017
		26,000	Net Income
Dividends	18,000		
		27,000	12/31/2018

> Key Terms

Cash Flows (p. 733)
Direct Method (p. 736)
Financing Activities (p. 734)
Free Cash Flow (p. 751)
Indirect Method (p. 736)
Investing Activities (p. 734)
Non-cash Investing and Financing Activities (p. 735)
Operating Activities (p. 734)
Statement of Cash Flows (p. 733)

> Quick Check

Learning Objective 1

1. The purposes of the statement of cash flows are to

a. evaluate management decisions.
b. determine ability to pay debts and dividends.
c. predict future cash flows.
d. All of the above

Learning Objective 1

2. The main categories of cash flow activities on the statement of cash flows are

a. direct and indirect.
b. current and long-term.
c. non-cash investing and financing.
d. operating, investing, and financing.

Learning Objective 1

3. Operating activities are most closely related to

a. long-term assets.
b. current assets and current liabilities.
c. long-term liabilities and stockholders' equity.
d. dividends and treasury stock.

Learning Objective 2

4. Which item does *not* appear on a statement of cash flows prepared by the indirect method?

a. Collections from customers
b. Depreciation expense
c. Net income
d. Gain on sale of land

Learning Objective 2

5. Leather Shop earned net income of $57,000 after deducting depreciation of $5,000 and all other expenses. Current assets decreased by $4,000, and current liabilities increased by $8,000. How much was Leather Shop's net cash provided by operating activities (indirect method)?

a. $40,000 **b.** $66,000 **c.** $48,000 **d.** $74,000

Learning Objective 2

6. The Plant Assets account and Accumulated Depreciation—Plant Assets account of Star Media show the following:

Plant Assets

12/31/2017	100,000		
Acquisitions	428,000	52,500	Disposals
12/31/2018	475,500		

Accumulated Depreciation—Plant Assets

		20,000	12/31/2017
Disposals	10,500	34,000	Depr. Exp.
		43,500	12/31/2018

Star Media sold plant assets at an $11,000 loss. Where on the statement of cash flows should Star Media report the sale of plant assets? How much should the business report for the sale?

a. Financing cash flows—cash receipt of $42,000
b. Investing cash flows—cash receipt of $53,000
c. Investing cash flows—cash receipt of $31,000
d. Investing cash flows—cash receipt of $42,000

Learning Objective 2

7. Mountain Water Corp. issued common stock of $28,000 to pay off long-term notes payable of $28,000. In what section(s) would these transactions be recorded?
   a. Financing activities payment of note, $(28,000)
   b. Financing activities cash receipt, $28,000
   c. Non-cash investing and financing activities, $28,000
   d. Both a and b are correct.

Learning Objective 3

8. Holmes, Inc. expects net cash flow from operating activities to be $160,000, and the company plans purchases of equipment of $83,000 and repurchases of stock of $24,000. What is Holmes's free cash flow?
   a. $53,000 **b.** $160,000 **c.** $77,000 **d.** $83,000

Learning Objective 4 Appendix 14A

9A. Maxwell Furniture Center had accounts receivable of $20,000 at the beginning of the year and $54,000 at year-end. Revenue for the year totaled $116,000. How much cash did the business collect from customers?
   a. $150,000 **b.** $62,000 **c.** $116,000 **d.** $82,000

Learning Objective 5 Appendix 14B

10B. If accrued liabilities increased during the year, which of the following is correct when using a spreadsheet to complete the statement of cash flows (indirect method)?
   a. Increase in Accrued Liabilities would be debited
   b. Increase in Accrued Liabilities would be credited
   c. Accrued Liabilities would be debited
   d. None of the above is correct.

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What does the statement of cash flows report?
2. How does the statement of cash flows help users of financial statements?
3. Describe the three basic types of cash flow activities.
4. What types of transactions are reported in the non-cash investing and financing activities section of the statement of cash flows?
5. Describe the two formats for reporting operating activities on the statement of cash flows.
6. Describe the five steps used to prepare the statement of cash flows by the indirect method.
7. Explain why depreciation expense, depletion expense, and amortization expense are added to net income in the operating activities section of the statement of cash flows when using the indirect method.
8. If a company experienced a loss on disposal of long-term assets, how would this be reported in the operating activities section of the statement of cash flows when using the indirect method? Why?

9. If current assets other than cash increase, what is the effect on cash? What about a decrease in current assets other than cash?

10. If current liabilities increase, what is the effect on cash? What about a decrease in current liabilities?

11. What accounts on the balance sheet must be evaluated when completing the investing activities section of the statement of cash flows?

12. What accounts on the balance sheet must be evaluated when completing the financing activities section of the statement of cash flows?

13. What should the net change in cash section of the statement of cash flows always reconcile with?

14. What is free cash flow, and how is it calculated?

15A. How does the direct method differ from the indirect method when preparing the operating activities section of the statement of cash flows?

16B. Why might a spreadsheet be helpful when completing the statement of cash flows?

> Short Exercises

S14-1 Describing the purposes of the statement of cash flows

Learning Objective 1

Financial statements all have a goal. The statement of cash flows does as well. Describe how the statement of cash flows helps investors and creditors perform each of the following functions:

a. Predict future cash flows.

b. Evaluate management decisions.

c. Predict the ability to make debt payments to lenders and pay dividends to stockholders.

S14-2 Classifying items on the statement of cash flows

Learning Objective 1

Cash flow items must be categorized into one of four categories. Identify each item as operating (O), investing (I), financing (F), or non-cash (N).

a. Cash purchase of merchandise inventory

b. Cash payment of dividends

c. Cash receipt from the collection of long-term notes receivable

d. Cash payment for income taxes

e. Purchase of equipment in exchange for notes payable

f. Cash receipt from the sale of land

g. Cash received from borrowing money

h. Cash receipt for interest income

i. Cash receipt from the issuance of common stock

j. Cash payment of salaries

Learning Objectives 1, 2

S14-3 Classifying items on the indirect statement of cash flows

Destiny Corporation is preparing its statement of cash flows by the *indirect* method. Destiny has the following items for you to consider in preparing the statement:

a. Increase in accounts payable
b. Payment of dividends
c. Decrease in accrued liabilities
d. Issuance of common stock
e. Gain on sale of building
f. Loss on sale of land
g. Depreciation expense
h. Increase in merchandise inventory
i. Decrease in accounts receivable
j. Purchase of equipment

Identify each item as a(n):

- Operating activity—addition to net income (O+) or subtraction from net income (O−)
- Investing activity—cash inflow (I+) or cash outflow (I−)
- Financing activity—cash inflow (F+) or cash outflow (F−)
- Activity that is not used to prepare the indirect statement of cash flows (N)

Learning Objective 2

S14-4 Computing cash flows from operating activities—indirect method

DVR Equipment, Inc. reported the following data for 2018:

Income Statement:	
Net Income	$ 43,000
Depreciation Expense	6,000
Balance Sheet:	
Increase in Accounts Receivable	6,000
Decrease in Accounts Payable	2,000

Compute DVR's net cash provided by operating activities—indirect method.

Learning Objective 2

S14-5 Computing cash flows from operating activities—indirect method

Winding Road Cellular accountants have assembled the following data for the year ended April 30, 2018:

Cash receipt from sale of land	$ 27,000	Net income	$ 55,000
Depreciation expense	2,000	Cash purchase of equipment	44,000
Cash payment of dividends	5,800	Decrease in current liabilities	20,000
Cash receipt from issuance of common stock	17,000	Increase in current assets other than cash	27,000

Prepare the *operating* activities section using the indirect method for Winding Road Cellular's statement of cash flows for the year ended April 30, 2018.

Note: Short Exercise S14-5 must be completed before attempting Short Exercise S14-6.

Learning Objective 2

S14-6 Computing cash flows from investing and financing activities

Use the data in Short Exercise S14-5 to complete this exercise. Prepare Winding Road Cellular's statement of cash flows using the indirect method for the year ended April 30, 2018. Assume beginning and ending Cash are $48,000 and $52,200, respectively.

Learning Objective 2

S14-7 Computing investing and financing cash flows

Preston Media Corporation had the following income statement and balance sheet for 2018:

PRESTON MEDIA CORPORATION Income Statement Year Ended December 31, 2018	
Sales Revenue	$ 80,000
Depreciation Expense—Plant Assets	11,000
Other Expenses	50,000
Net Income	$ 19,000

PRESTON MEDIA CORPORATION Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 5,000	$ 3,900
Accounts Receivable	9,600	5,100
Long-term Assets:		
Plants Assets	105,350	84,350
Accumulated Depreciation—Plant Assets	(29,350)	(18,350)
Total Assets	$ 90,600	$ 75,000
Liabilities		
Current Liabilities:		
Accounts Payable	$ 8,000	$ 4,500
Long-term Liabilities:		
Notes Payable	9,000	12,000
Total Liabilities	17,000	16,500
Stockholders' Equity		
Common Stock, no par	27,000	23,000
Retained Earnings	46,600	35,500
Total Stockholders' Equity	73,600	58,500
Total Liabilities and Stockholders' Equity	$ 90,600	$ 75,000

Requirements

1. Compute the acquisition of plant assets for Preston Media Corporation during 2018. The business sold no plant assets during the year. Assume the company paid cash for the acquisition of plant assets.
2. Compute the payment of a long-term note payable. During the year, the business issued a $4,400 note payable.

CHAPTER 14

Note: Short Exercise S14-7 must be completed before attempting Short Exercise S14-8.

Learning Objective 2

S14-8 Preparing the statement of cash flows—indirect method

Use the Preston Media Corporation data in Short Exercise S14-7 and the results you calculated from the requirements. Prepare Preston Media's statement of cash flows—indirect method—for the year ended December 31, 2018.

Learning Objective 2

S14-9 Computing the change in cash; identifying non-cash transactions

Jennifer's Wedding Shops earned net income of $27,000, which included depreciation of $16,000. Jennifer's acquired a $119,000 building by borrowing $119,000 on a long-term note payable.

Requirements

1. How much did Jennifer's cash balance increase or decrease during the year?
2. Were there any non-cash transactions for the company? If so, show how they would be reported in the statement of cash flows.

Learning Objective 3

S14-10 Computing free cash flow

Julie Lopez Company expects the following for 2018:

- Net cash provided by operating activities of $148,000.
- Net cash provided by financing activities of $56,000.
- Net cash used for investing activities of $77,000 (no sales of long-term assets).
- Cash dividends paid to stockholders of $7,000.

How much free cash flow does Lopez expect for 2018?

Learning Objective 4
Appendix 14A

S14A-11 Preparing a statement of cash flows using the direct method

Jelly Bean, Inc. began 2018 with cash of $58,000. During the year, Jelly Bean earned revenue of $595,000 and collected $614,000 from customers. Expenses for the year totaled $427,000, of which Jelly Bean paid $212,000 in cash to suppliers and $205,000 in cash to employees. Jelly Bean also paid $148,000 to purchase equipment and a cash dividend of $57,000 to its stockholders during 2018. Prepare the company's statement of cash flows for the year ended December 31, 2018. Format operating activities by the direct method.

Learning Objective 4
Appendix 14A

S14A-12 Preparing operating activities using the direct method

Amy's Learning Center has assembled the following data for the year ended June 30, 2018:

Payments to suppliers	$ 115,000
Cash payment for purchase of equipment	39,000
Payments to employees	66,000
Payment of notes payable	34,000
Payment of dividends	7,500
Cash receipt from issuance of stock	22,000
Collections from customers	188,000
Cash receipt from sale of land	58,000
Cash balance, June 30, 2017	41,000

Prepare the *operating* activities section of the business's statement of cash flows for the year ended June 30, 2018, using the direct method.

Note: Short Exercise S14A-12 must be completed before attempting Short Exercise S14A-13.

Learning Objective 4
Appendix 14A

S14A-13 Preparing the direct method statement of cash flows

Use the data in Short Exercise S14A-12 and your results. Prepare the business's complete statement of cash flows for the year ended June 30, 2018, using the *direct* method for operating activities.

Learning Objective 4
Appendix 14A

S14A-14 Preparing the direct method statement of cash flows

Red Toy Company reported the following comparative balance sheet:

RED TOY COMPANY Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 21,000	$ 17,000
Accounts Receivable	53,000	42,000
Merchandise Inventory	76,000	88,000
Prepaid Expenses	3,100	2,100
Long-term Assets:		
Plants Assets, Net	221,000	185,000
Investments	77,000	91,000
Total Assets	$ 451,100	$ 425,100
Liabilities		
Current Liabilities:		
Accounts Payable	$ 42,000	$ 38,000
Salaries Payable	25,000	20,000
Accrued Liabilities	7,000	16,000
Long-term Liabilities:		
Notes Payable	61,000	69,000
Total Liabilities	135,000	143,000
Stockholders' Equity		
Common Stock, no par	45,000	40,000
Retained Earnings	271,100	242,100
Total Stockholders' Equity	316,100	282,100
Total Liabilities and Stockholders' Equity	$ 451,100	$ 425,100

Requirements

1. Compute the collections from customers during 2018 for Red Toy Company. Sales Revenue totaled $134,000.
2. Compute the payments for inventory during 2018. Cost of Goods Sold was $79,000.

Learning Objective 5
Appendix 14B

S14B-15 Using a spreadsheet to complete the statement of cash flows—indirect method

Companies can use a spreadsheet to complete the statement of cash flows. Each item that follows is recorded in the transaction analysis columns of the spreadsheet.

a. Net income

b. Increases in current assets (other than Cash)

c. Decreases in current liabilities

d. Cash payment for acquisition of plant assets

e. Cash receipt from issuance of common stock

f. Depreciation expense

Identify each as being recorded by a Debit or Credit in the *statement of cash flows section* of the spreadsheet.

> Exercises

Learning Objective 1

E14-16 Classifying cash flow items

Consider the following transactions:

a. Purchased equipment for $130,000 cash.

b. Issued $14 par preferred stock for cash.

c. Cash received from sales to customers of $35,000.

d. Cash paid to vendors, $17,000.

e. Sold building for $19,000 gain for cash.

f. Purchased treasury stock for $28,000.

g. Retired a notes payable with 1,250 shares of the company's common stock.

Identify the category of the statement of cash flows in which each transaction would be reported.

Learning Objective 1

E14-17 Classifying transactions on the statement of cash flows—indirect method

Consider the following transactions:

Date	Accounts and Explanation	Debit	Credit
a.	Cash	72,000	
	Common Stock		72,000
b.	Treasury Stock	16,500	
	Cash		16,500
c.	Cash	88,000	
	Sales Revenue		88,000
d.	Land	103,000	
	Cash		103,000
e.	Depreciation Expense—Equipment	6,800	
	Accumulated Depreciation—Equipment		6,800
f.	Dividends Payable	19,500	
	Cash		19,500
g.	Land	22,000	
	Notes Payable		22,000
h.	Cash	9,600	
	Equipment		9,600
i.	Bonds Payable	51,000	
	Cash		51,000
j.	Building	137,000	
	Notes Payable		137,000
k.	Loss on Disposal of Equipment	1,800	
	Accumulated Depreciation—Equipment	200	
	Equipment		2,000

Identify the category of the statement of cash flows, indirect method, in which each transaction would be reported.

Learning Objectives 1, 2

E14-18 Classifying items on the indirect statement of cash flows

The statement of cash flows categorizes like transactions for optimal reporting.

Identify each item as a(n):

- Operating activity—addition to net income (O+) or subtraction from net income (O−)
- Investing activity—cash inflow (I+) or cash outflow (I−)
- Financing activity—cash inflow (F+) or cash outflow (F−)
- Non-cash investing and financing activity (NIF)
- Activity that is not used to prepare the indirect statement of cash flows (N)

The *indirect* method is used to report cash flows from operating activities.

a. Loss on sale of land.

b. Acquisition of equipment by issuance of note payable.

c. Payment of long-term debt.

d. Acquisition of building by issuance of common stock.

e. Increase in Salaries Payable.

f. Decrease in Merchandise Inventory.

g. Increase in Prepaid Expenses.

h. Decrease in Accrued Liabilities.

i. Cash sale of land (no gain or loss).

j. Issuance of long-term note payable to borrow cash.

k. Depreciation Expense.

l. Purchase of treasury stock.

m. Issuance of common stock.

n. Increase in Accounts Payable.

o. Net income.

p. Payment of cash dividend.

Learning Objective 2

Net Cash Prov. by Op. Act. $16,000

E14-19 Computing operating activities cash flow—indirect method

The records of Vintage Color Engraving reveal the following:

Net income	$ 36,000	Depreciation expense	$ 5,000
Sales revenue	53,000	Decrease in current liabilities	19,000
Loss on sale of land	4,000	Increase in current assets other than cash	10,000
Acquisition of land	35,000		

Compute cash flows from operating activities by the indirect method for year ended December 31, 2018.

Learning Objective 2

Net Cash Prov. by Op. Act. $49,500

E14-20 Computing operating activities cash flow—indirect method

The accounting records of CD Sales, Inc. include the following accounts:

Account	Beginning Balance	Ending Balance
Cash	$ 7,500	$ 6,500
Accounts Receivable	21,000	17,500
Merchandise Inventory	20,000	30,000
Accounts Payable	15,000	19,000

Accumulated Depreciation—Equipment

	56,000	Jul. 1
	2,000	Depr. Exp.
	58,000	Jul. 31

Retained Earnings

		63,000	Jul. 1
Dividends	15,000	50,000	Net Inc.
		98,000	Jul. 31

Compute CD's net cash provided by (used for) operating activities during July 2018. Use the indirect method.

E14-21 Preparing the statement of cash flows—indirect method

Learning Objective 2

Net Cash Prov. by Op. Act. $98,000

The income statement of Boost Plus, Inc. follows:

BOOST PLUS, INC. Income Statement Year Ended September 30, 2018		
Net Sales Revenue		$ 231,000
Cost of Goods Sold		94,000
Gross Profit		137,000
Operating Expenses:		
Salaries Expense	$ 54,000	
Depreciation Expense—Plant Assets	27,000	
Total Operating Expenses		81,000
Net Income Before Income Taxes		56,000
Income Tax Expense		3,000
Net Income		$ 53,000

Additional data follow:

a. Acquisition of plant assets is $124,000. Of this amount, $108,000 is paid in cash and $16,000 by signing a note payable.

b. Cash receipt from sale of land totals $20,000. There was no gain or loss.

c. Cash receipts from issuance of common stock total $36,000.

d. Payment of notes payable is $15,000.

e. Payment of dividends is $5,000.

f. From the balance sheet:

	September 30	
	2018	2017
Cash	$ 39,000	$ 13,000
Accounts Receivable	46,000	61,000
Merchandise Inventory	94,000	88,000
Land	82,000	102,000
Plant Assets	214,000	90,000
Accumulated Depreciation	(61,000)	(34,000)
Accounts Payable	32,000	15,000
Accrued Liabilities	12,000	20,000
Notes Payable (long-term)	16,000	15,000
Common Stock, no par	40,000	4,000
Retained Earnings	314,000	266,000

Prepare Boost Plus's statement of cash flows for the year ended September 30, 2018, using the indirect method. Include a separate section for non-cash investing and financing activities.

Learning Objective 2

2. Book Value on Plant Assets Sold $7,000

E14-22 Computing cash flows for investing and financing activities

Consider the following facts for Java Jolt:

a. Beginning and ending Retained Earnings are $45,000 and $70,000, respectively. Net income for the period is $60,000.

b. Beginning and ending Plant Assets are $124,500 and $134,500, respectively.

c. Beginning and ending Accumulated Depreciation—Plant Assets are $21,500 and $26,500, respectively.

d. Depreciation Expense for the period is $17,000, and acquisitions of new plant assets total $29,000. Plant assets were sold at a $5,000 gain.

Requirements

1. How much are cash dividends?
2. What was the amount of the cash receipt from the sale of plant assets?

Learning Objective 2

2. Payment: $8,000
4. Dividends $47,000

E14-23 Computing the cash effect

Rouse Exercise Equipment, Inc. reported the following financial statements for 2018:

ROUSE EXERCISE EQUIPMENT, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 713,000
Cost of Goods Sold		342,000
Gross Profit		371,000
Operating Expenses:		
Depreciation Expense	$ 54,000	
Other Operating Expenses	210,000	
Total Operating Expenses		264,000
Net Income		$ 107,000

ROUSE EXERCISE EQUIPMENT, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 17,000	$ 16,000
Accounts Receivable	57,000	46,000
Merchandise Inventory	79,000	90,000
Long-term Assets:		
Plants Assets	260,500	216,400
Accumulated Depreciation—Plant Assets	(38,500)	(32,400)
Investments	96,000	73,000
Total Assets	$ 471,000	$ 409,000
Liabilities		
Current Liabilities:		
Accounts Payable	$ 72,000	$ 71,000
Salaries Payable	3,000	5,000
Long-term Liabilities:		
Notes Payable	61,000	69,000
Total Liabilities	136,000	145,000
Stockholders' Equity		
Common Stock, no par	45,000	34,000
Retained Earnings	290,000	230,000
Total Stockholders' Equity	335,000	264,000
Total Liabilities and Stockholders' Equity	$ 471,000	$ 409,000

Requirements

1. Compute the amount of Rouse Exercise's acquisition of plant assets. Assume the acquisition was for cash. Rouse Exercise disposed of plant assets at book value. The cost and accumulated depreciation of the disposed asset was $47,900. No cash was received upon disposal.
2. Compute new borrowing or payment of long-term notes payable, with Rouse Exercise having only one long-term notes payable transaction during the year.
3. Compute the issuance of common stock with Rouse Exercise having only one common stock transaction during the year.
4. Compute the payment of cash dividends.

Note: Exercise E14-23 must be completed before attempting Exercise E14-24.

E14-24 Preparing the statement of cash flows—indirect method

Learning Objective 2

Use the Rouse Exercise Equipment data in Exercise E14-23. Prepare the company's statement of cash flows—indirect method—for the year ended December 31, 2018. Assume investments are purchased with cash.

Net Cash Prov. by Op. Act. $160,000

Learning Objective 2

Total Non-cash Inv. and Fin. Act. $153,000

E14-25 Identifying and reporting non-cash transactions

Dirtbikes, Inc. identified the following selected transactions that occurred during the year ended December 31, 2018:

a. Issued 750 shares of $3 par common stock for cash of $17,000.

b. Issued 5,100 shares of $3 par common stock for a building with a fair market value of $96,000.

c. Purchased new truck with a fair market value of $29,000. Financed it 100% with a long-term note.

d. Retired short-term notes of $28,000 by issuing 1,900 shares of $3 par common stock.

e. Paid long-term note of $10,500 to Bank of Tallahassee. Issued new long-term note of $23,000 to Bank of Trust.

Identify any non-cash transactions that occurred during the year, and show how they would be reported in the non-cash investing and financing activities section of the statement of cash flows.

Learning Objective 3

E14-26 Analyzing free cash flow

Use the Rouse Exercise Equipment data in Exercises E14-23 and E14-24. Rouse plans to purchase a truck for $23,000 and a forklift for $125,000 next year. In addition, it plans to pay cash dividends of $3,500. Assuming Rouse plans similar activity for 2019, what would be the amount of free cash flow?

Learning Objective 4
Appendix 14A

Net Cash Prov. by Op. Act. $3,000

E14A-27 Preparing operating activities cash flow—direct method

The accounting records of Four Seasons Parts reveal the following:

Payment of salaries and wages	$ 34,000	Net income	$ 21,000
Depreciation expense	10,000	Payment of income tax	16,000
Payment of interest	17,000	Collection of dividend revenue	5,000
Payment of dividends	5,000	Payment to suppliers	51,000
Collections from customers	116,000		

Compute cash flows from operating activities using the *direct* method for the year ended December 31, 2018.

E14A-28 Preparing the statement of cash flows—direct method

Learning Objective 4
Appendix 14A

Net Cash Prov. by Op. Act. $76,000

The income statement and additional data of Value Corporation follow:

VALUE CORPORATION Income Statement Year Ended June 30, 2018		
Net Sales Revenue		$ 233,000
Cost of Goods Sold		104,000
Gross Profit		129,000
Operating Expenses:		
Salaries Expense	$ 48,000	
Depreciation Expense—Plant Assets	21,000	
Advertising Expense	12,000	
Total Operating Expenses		81,000
Operating Income		48,000
Other Income and (Expenses):		
Dividend Revenue	7,000	
Interest Expense	(2,500)	
Total Other Income and (Expenses)		4,500
Net Income Before Income Taxes		52,500
Income Tax Expense		7,500
Net Income		$ 45,000

a. Collections from customers are $13,000 more than sales.
b. Dividend revenue, interest expense, and income tax expense equal their cash amounts.
c. Payments to suppliers are the sum of cost of goods sold plus advertising expense.
d. Payments to employees are $3,000 more than salaries expense.
e. Cash payment for the acquisition of plant assets is $102,000.
f. Cash receipts from sale of land total $29,000.
g. Cash receipts from issuance of common stock total $38,000.
h. Payment of long-term notes payable is $10,000.
i. Payment of dividends is $9,000.
j. Cash balance at June 30, 2017, was $21,000; at June 30, 2018, it was $43,000.

Prepare Value Corporation's statement of cash flows for the year ended June 30, 2018. Use the *direct* method.

E14A-29 Computing cash flow items—direct method

Learning Objective 4
Appendix 14A

1. Cash Receipts from Cust. $72,000

Consider the following facts:

a. Beginning and ending Accounts Receivable are $24,000 and $20,000, respectively. Credit sales for the period total $68,000.
b. Cost of goods sold is $77,000.

CHAPTER 14

c. Beginning Merchandise Inventory balance is $29,000, and ending Merchandise Inventory balance is $26,000.

d. Beginning and ending Accounts Payable are $12,000 and $16,000, respectively.

Requirements

1. Compute cash collections from customers.
2. Compute cash payments for merchandise inventory.

Learning Objective 4
Appendix 14A

2. Cash Paid for Merchandise Inventory $18,542
7. Dividends $374

E14A-30 Computing cash flow items—direct method

A-One Mobile Homes reported the following in its financial statements for the year ended December 31, 2018:

	2018	2017
Income Statement		
Net Sales Revenue	$ 25,118	$ 21,893
Cost of Goods Sold	18,074	15,501
Depreciation Expense	271	234
Other Operating Expenses	4,632	4,277
Income Tax Expense	530	482
Net Income	$ 1,611	$ 1,399
Balance Sheet		
Cash	$ 21	$ 19
Accounts Receivable	798	615
Merchandise Inventory	3,483	2,832
Property, Plant, and Equipment, net	4,351	3,437
Accounts Payable	1,547	1,364
Accrued Liabilities	938	851
Long-term Liabilities	477	461
Common Stock, no par	670	443
Retained Earnings	5,021	3,784

Requirements

1. Compute the collections from customers.
2. Compute payments for merchandise inventory.
3. Compute payments of other operating expenses.
4. Compute the acquisitions of property, plant, and equipment (no sales of property during 2018).
5. Compute the amount of borrowing, with A-One paying no long-term liabilities.
6. Compute the cash receipt from issuance of common stock.
7. Compute the payment of cash dividends.

Learning Objective 5
Appendix 14B

E14B-31 Using a spreadsheet to prepare the statement of cash flows—indirect method

Use the Boost Plus, Inc. data in Exercise E14-21 to prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method.

> Problems Group A

P14-32A Identifying the purpose and preparing the statement of cash flows—indirect method

Learning Objectives 1, 2

2. Net Income $266,400
4. Net Cash Used by Op. Act. $(48,000)

American Rare Coins (ARC) was formed on January 1, 2018. Additional data for the year follow:

a. On January 1, 2018, ARC issued no par common stock for $450,000.

b. Early in January, ARC made the following cash payments:

1. For store fixtures, $53,000
2. For merchandise inventory, $340,000
3. For rent expense on a store building, $20,000

c. Later in the year, ARC purchased merchandise inventory on account for $239,000. Before year-end, ARC paid $139,000 of this accounts payable.

d. During 2018, ARC sold 2,400 units of merchandise inventory for $275 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was $250,000, and ending merchandise inventory totaled $329,000.

e. The store employs three people. The combined annual payroll is $96,000, of which ARC still owes $3,000 at year-end.

f. At the end of the year, ARC paid income tax of $17,000. There are no income taxes payable.

g. Late in 2018, ARC paid cash dividends of $44,000.

h. For store fixtures, ARC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. What is the purpose of the statement of cash flows?
2. Prepare ARC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
3. Prepare ARC's balance sheet at December 31, 2018.
4. Prepare ARC's statement of cash flows using the indirect method for the year ended December 31, 2018.

P14-33A Preparing the statement of cash flows—indirect method

Learning Objective 2

Net Cash Used for Inv. Act. $(15,500)

Accountants for Morganson, Inc. have assembled the following data for the year ended December 31, 2018:

	2018	2017
Current Assets:		
Cash	$ 99,400	$ 25,000
Accounts Receivable	64,100	69,700
Merchandise Inventory	83,000	75,000
Current Liabilities:		
Accounts Payable	57,600	55,200
Income Tax Payable	14,800	16,800

Transaction Data for 2018:			
Issuance of common stock for cash	$ 38,000	Payment of notes payable	$ 46,100
Depreciation expense	24,000	Payment of cash dividends	50,000
Purchase of equipment with cash	74,000	Issuance of notes payable to borrow cash	62,000
Acquisition of land by issuing long-term notes payable	119,000	Gain on sale of building	4,500
Book value of building sold	54,000	Net income	68,500

Prepare Morganson's statement of cash flows using the indirect method. Include an accompanying schedule of non-cash investing and financing activities.

Learning Objective 2

Net Cash Prov. by Op. Act. $125,100

P14-34A Preparing the statement of cash flows—indirect method with non-cash transactions

The 2018 income statement and comparative balance sheet of Rolling Hills, Inc. follow:

ROLLING HILLS, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 440,000
Cost of Goods Sold		209,200
Gross Profit		230,800
Operating Expenses:		
Salaries Expense	$ 77,400	
Depreciation Expense—Plant Assets	14,400	
Other Operating Expenses	10,200	
Total Operating Expenses		102,000
Operating Income		128,800
Other Income and (Expenses):		
Interest Revenue	8,700	
Interest Expense	(21,100)	
Total Other Income and (Expenses)		(12,400)
Net Income Before Income Taxes		116,400
Income Tax Expense		20,000
Net Income		$ 96,400

CHAPTER 14

ROLLING HILLS, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 26,900	$ 15,700
Accounts Receivable	26,500	25,400
Merchandise Inventory	79,800	91,500
Long-term Assets:		
Land	35,100	14,000
Plant Assets	124,840	114,650
Accumulated Depreciation—Plant Assets	(18,940)	(17,950)
Total Assets	$ 274,200	$ 243,300
Liabilities		
Current Liabilities:		
Accounts Payable	$ 35,700	$ 30,400
Accrued Liabilities	28,700	30,300
Long-term Liabilities:		
Notes Payable	79,000	108,000
Total Liabilities	143,400	168,700
Stockholders' Equity		
Common Stock, no par	88,900	64,500
Retained Earnings	41,900	10,100
Total Stockholders' Equity	130,800	74,600
Total Liabilities and Stockholders' Equity	$ 274,200	$ 243,300

Additionally, Rolling Hills purchased land of $21,100 by financing it 100% with long-term notes payable during 2018. During the year, there were no sales of land, no retirements of stock, and no treasury stock transactions. A plant asset was disposed of for $0. The cost and the accumulated depreciation of the disposed asset was $13,410. The plant acquisition was for cash.

Requirements

1. Prepare the 2018 statement of cash flows, formatting operating activities by the *indirect* method.
2. How will what you learned in this problem help you evaluate an investment?

Learning Objectives 2, 3

1. Net Cash Used for Inv. Act. $(152,700)

P14-35A Preparing the statement of cash flows—indirect method, evaluating cash flows, and measuring free cash flows

The comparative balance sheet of Jackson Educational Supply at December 31, 2018, reported the following:

	2018	2017
Current Assets:		
Cash	$ 87,700	$ 23,500
Accounts Receivable	15,300	22,000
Merchandise Inventory	62,600	60,400
Current Liabilities:		
Accounts Payable	28,100	26,100
Accrued Liabilities	10,600	11,300

Jackson's transactions during 2018 included the following:

Payment of cash dividends	$ 16,200	Depreciation expense	$ 16,700
Purchase of equipment with cash	54,700	Purchase of building with cash	98,000
Issuance of long-term notes payable to borrow cash	48,000	Net income	57,600
Issuance of common stock for cash	105,000		

Requirements

1. Prepare the statement of cash flows of Jackson Educational Supply for the year ended December 31, 2018. Use the indirect method to report cash flows from operating activities.
2. Evaluate Jackson's cash flows for the year. Mention all three categories of cash flows, and give the reason for your evaluation.
3. If Jackson plans similar activity for 2019, what is its expected free cash flow?

Learning Objective 4
Appendix 14A

2. Total Assets $1,051,400
3. Net Cash Prov. by Op. Act. $308,500

P14A-36A Preparing the statement of cash flows—direct method

Boundary Rare Coins (BRC) was formed on January 1, 2018. Additional data for the year follow:

a. On January 1, 2018, BRC issued no par common stock for $475,000.

b. Early in January, BRC made the following cash payments:

1. For store fixtures, $53,000
2. For merchandise inventory, $260,000
3. For rent expense on the store building, $13,000

c. Later in the year, BRC purchased merchandise inventory on account for $240,000. Before year-end, BRC paid $160,000 of this accounts payable.

d. During 2018, BRC sold 2,200 units of merchandise inventory for $450 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was $330,000, and ending merchandise inventory totaled $170,000.

e. The store employs three people. The combined annual payroll is $80,000, of which BRC still owes $4,000 at year-end.

f. At the end of the year, BRC paid income tax of $24,000. There are no income taxes payable.

g. Late in 2018, BRC paid cash dividends of $40,000.

h. For store fixtures, BRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. Prepare BRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
2. Prepare BRC's balance sheet at December 31, 2018.
3. Prepare BRC's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the *direct* method.

P14A-37A Preparing the statement of cash flows—direct method

Learning Objective 4
Appendix 14A

1. Net Cash Prov. by Op. Act. $125,100
Collections from Cust. $438,900

Use the Rolling Hills, Inc. data from Problem P14-34A.

Requirements

1. Prepare the 2018 statement of cash flows by the direct method.
2. How will what you learned in this problem help you evaluate an investment?

P14B-38A Using a spreadsheet to prepare the statement of cash flows—indirect method

Learning Objective 5
Appendix 14B

Cash Pmt. of Div. $28,300
Cash Pmt. for Acq. of Land $25,200

The 2018 comparative balance sheet and income statement of Appleton Group, Inc. follow. Appleton disposed of a plant asset at book value during 2018.

APPLETON GROUP, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 443,000
Cost of Goods Sold		205,800
Gross Profit		237,200
Operating Expenses:		
Salaries Expense	$ 76,800	
Depreciation Expense—Plant Assets	15,400	
Other Operating Expenses	49,300	
Total Operating Expenses		141,500
Operating Income		95,700
Other Income and (Expenses):		
Interest Revenue	11,600	
Interest Expense	(24,400)	
Total Other Income and (Expenses)		(12,800)
Net Income Before Income Taxes		82,900
Income Tax Expense		16,200
Net Income		$ 66,700

CHAPTER 14

APPLETON GROUP, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 14,700	$ 15,900
Accounts Receivable	42,200	43,900
Merchandise Inventory	97,600	93,900
Long-term Assets:		
Land	42,200	17,000
Plant Assets	121,950	110,750
Accumulated Depreciation—Plant Assets	(20,250)	(16,450)
Total Assets	$ 298,400	$ 265,000
Liabilities		
Current Liabilities:		
Accounts Payable	$ 25,900	$ 26,900
Accrued Liabilities	24,500	22,700
Long-term Liabilities:		
Notes Payable	51,000	65,000
Total Liabilities	101,400	114,600
Stockholders' Equity		
Common Stock, no par	138,900	130,700
Retained Earnings	58,100	19,700
Total Stockholders' Equity	197,000	150,400
Total Liabilities and Stockholders' Equity	$ 298,400	$ 265,000

Prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method. A plant asset was disposed of for $0. The cost and accumulated depreciation of the disposed asset was $11,600. There were no sales of land, no retirement of common stock, and no treasury stock transactions. Assume plant asset and land acquisitions were for cash.

> Problems Group B

Learning Objectives 1, 2

2. Net Income $492,800
4. Net Cash Prov. by Op. Act. $359,500

P14-39B Identifying the purpose and preparing the statement of cash flows—indirect method

Classic Rare Coins (CRC) was formed on January 1, 2018. Additional data for the year follow:

a. On January 1, 2018, CRC issued no par common stock for $525,000.

b. Early in January, CRC made the following cash payments:

1. For store fixtures, $51,000
2. For merchandise inventory, $240,000
3. For rent expense on a store building, $18,000

c. Later in the year, CRC purchased merchandise inventory on account for $243,000. Before year-end, CRC paid $153,000 of this accounts payable.

d. During 2018, CRC sold 2,800 units of merchandise inventory for $325 each. Before year-end, the company collected 95% of this amount. Cost of goods sold for the year was $290,000, and ending merchandise inventory totaled $193,000.

e. The store employs three people. The combined annual payroll is $82,000, of which CRC still owes $5,000 at year-end.

f. At the end of the year, CRC paid income tax of $17,000. There was no income taxes payable.

g. Late in 2018, CRC paid cash dividends of $38,000.

h. For store fixtures, CRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. What is the purpose of the statement of cash flows?
2. Prepare CRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
3. Prepare CRC's balance sheet at December 31, 2018.
4. Prepare CRC's statement of cash flows using the indirect method for the year ended December 31, 2018.

P14-40B Preparing the statement of cash flows—indirect method

Learning Objective 2

Net Cash Prov. by Op. Act. $85,700

Accountants for Benson, Inc. have assembled the following data for the year ended December 31, 2018:

	2018	2017
Current Assets:		
Cash	$ 105,100	$ 18,000
Accounts Receivable	64,400	68,900
Merchandise Inventory	86,000	82,000
Current Liabilities:		
Accounts Payable	58,000	56,100
Income Tax Payable	14,700	16,900

Transaction Data for 2018:			
Issuance of common stock for cash	$ 37,000	Payment of notes payable	$ 47,100
Depreciation expense	24,000	Payment of cash dividends	53,000
Purchase of equipment with cash	69,000	Issuance of notes payable to borrow cash	68,000
Acquisition of land by issuing long-term notes payable	123,000	Gain on sale of building	4,500
Book value of building sold	61,000	Net income	66,000

Prepare Benson's statement of cash flows using the indirect method. Include an accompanying schedule of non-cash investing and financing activities.

Learning Objective 2

1. Net Cash Prov. by Op. Act. $136,300

P14-41B Preparing the statement of cash flows—indirect method with non-cash transactions

The 2018 income statement and comparative balance sheet of Sweet Valley, Inc. follow:

SWEET VALLEY, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 445,000
Cost of Goods Sold		203,200
Gross Profit		241,800
Operating Expenses:		
Salaries Expense	$ 77,400	
Depreciation Expense—Plant Assets	14,500	
Other Operating Expenses	10,100	
Total Operating Expenses		102,000
Operating Income		139,800
Other Income and (Expenses):		
Interest Revenue	8,200	
Interest Expense	(21,100)	
Total Other Income and (Expenses)		(12,900)
Net Income Before Income Taxes		126,900
Income Tax Expense		19,400
Net Income		**$ 107,500**

SWEET VALLEY, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 26,300	$ 15,400
Accounts Receivable	26,400	25,100
Merchandise Inventory	79,300	91,300
Long-term Assets:		
Land	34,900	14,000
Plant Assets	115,790	108,330
Accumulated Depreciation—Plant Assets	(19,890)	(18,630)
Total Assets	$ 262,800	$ 235,500
Liabilities		
Current Liabilities:		
Accounts Payable	$ 35,600	$ 30,100
Accrued Liabilities	28,900	30,800
Long-term Liabilities:		
Notes Payable	78,000	105,000
Total Liabilities	142,500	165,900
Stockholders' Equity		
Common Stock, no par	88,200	64,800
Retained Earnings	32,100	4,800
Total Stockholders' Equity	120,300	69,600
Total Liabilities and Stockholders' Equity	$ 262,800	$ 235,500

Additionally, Sweet Valley purchased land of $20,900 by financing it 100% with long-term notes payable during 2018. During the year, there were no sales of land, no retirements of stock, and no treasury stock transactions. A plant asset was disposed of for $0. The cost and the accumulated depreciation of the disposed asset was $13,240. Plant asset was acquired for cash.

Requirements

1. Prepare the 2018 statement of cash flows, formatting operating activities by the *indirect* method.
2. How will what you learned in this problem help you evaluate an investment?

CHAPTER 14

Learning Objectives 2, 3

1. Net Cash Used for Inv. Act. $(157,400)

P14-42B Preparing the statement of cash flows—indirect method, evaluating cash flows, and measuring free cash flows

The comparative balance sheet of Robeson Educational Supply at December 31, 2018, reported the following:

	2018	2017
Current Assets:		
Cash	$ 83,900	$ 20,500
Accounts Receivable	14,500	21,800
Merchandise Inventory	61,800	60,400
Current Liabilities:		
Accounts Payable	29,600	28,100
Accrued Liabilities	10,500	11,900

Robeson's transactions during 2018 included the following:

Payment of cash dividends	$ 21,200	Depreciation expense	$ 17,400
Purchase of equipment with cash	54,400	Purchase of building with cash	103,000
Issuance of long-term notes payable to borrow cash	44,000	Net income	63,600
Issuance of common stock for cash	111,000		

Requirements

1. Prepare the statement of cash flows of Robeson Educational Supply for the year ended December 31, 2018. Use the indirect method to report cash flows from operating activities.
2. Evaluate Robeson's cash flows for the year. Mention all three categories of cash flows, and give the reason for your evaluation.
3. If Robeson plans similar activity for 2018, what is its expected free cash flow?

Learning Objective 4
Appendix 14A

2. Total Assets $1,118,800
3. Collections from Cust. $918,000

P14A-43B Preparing the statement of cash flows—direct method

Diversion Rare Coins (DRC) was formed on January 1, 2018. Additional data for the year follow:

a. On January 1, 2018, DRC issued no par common stock for $450,000.

b. Early in January, DRC made the following cash payments:

1. For store fixtures, $46,000
2. For merchandise inventory, $310,000
3. For rent expense on a store building, $18,000

c. Later in the year, DRC purchased merchandise inventory on account for $238,000. Before year-end, DRC paid $138,000 of this accounts payable.

d. During 2018, DRC sold 2,700 units of merchandise inventory for $400 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was $340,000, and ending merchandise inventory totaled $208,000.

e. The store employs three people. The combined annual payroll is $97,000, of which DRC still owes $6,000 at year-end.

f. At the end of the year, DRC paid income tax of $18,000. There was no income taxes payable.

g. Late in 2018, DRC paid cash dividends of $35,000.

h. For store fixtures, DRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. Prepare DRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
2. Prepare DRC's balance sheet at December 31, 2018.
3. Prepare DRC's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the direct method.

P14A-44B Preparing the statement of cash flows—direct method

Learning Objective 4
Appendix 14A

1. Net Cash Prov. by Op. Act. $136,300
Collections from Cust. $443,700

Use the Sweet Valley data from Problem P14-41B.

Requirements

1. Prepare the 2018 statement of cash flows by the direct method.
2. How will what you learned in this problem help you evaluate an investment?

P14B-45B Using a spreadsheet to prepare the statement of cash flows—indirect method

Learning Objective 5
Appendix 14B

Cash Pmt. of Div. $28,200
Cash Pmt. of N/P $13,000

The 2018 comparative balance sheet and income statement of Attleboro Group, Inc. follow. Attleboro disposed of a plant asset at book value in 2018.

ATTLEBORO GROUP, INC. Income Statement Year Ended December 31, 2018		
Net Sales Revenue		$ 441,000
Cost of Goods Sold		205,400
Gross Profit		235,600
Operating Expenses:		
Salaries Expense	$ 76,300	
Depreciation Expense	15,300	
Other Operating Expenses	49,600	
Total Operating Expenses		141,200
Operating Income		94,400
Other Income and (Expenses):		
Interest Revenue	11,500	
Interest Expense	(24,400)	
Total Other Income and (Expenses)		(12,900)
Net Income Before Income Taxes		81,500
Income Tax Expense		16,200
Net Income		$ 65,300

ATTLEBORO GROUP, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	$ 14,000	$ 15,500
Accounts Receivable	42,000	43,700
Merchandise Inventory	96,800	93,300
Long-term Assets:		
Land	36,400	11,000
Plant Assets	121,250	112,850
Accumulated Depreciation—Plant Assets	(20,350)	(18,650)
Total Assets	$ 290,100	$ 257,700
Liabilities		
Current Liabilities:		
Accounts Payable	$ 24,500	$ 26,000
Accrued Liabilities	23,900	22,600
Long-term Liabilities:		
Notes Payable	56,000	69,000
Total Liabilities	104,400	117,600
Stockholders' Equity		
Common Stock, no par	129,500	121,000
Retained Earnings	56,200	19,100
Total Stockholders' Equity	185,700	140,100
Total Liabilities and Stockholders' Equity	$ 290,100	$ 257,700

Prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method. A plant asset was disposed of for $0. The cost and accumulated depreciation of the disposed asset was $13,600. There were no sales of land, no retirement of common stock, and no treasury stock transactions. Assume plant asset and land acquisitions were for cash.

CRITICAL THINKING

> Using Excel

P14-46 Using Excel to prepare the statement of cash flows, indirect method

Download an Excel template for this problem online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

The James Island Clothing Company began operations on July 1, 2018. The adjusted trial balance as of December 31, 2018, appears below, along with transaction data for 2018

James Island Clothing Company Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	**Debit**	**Credit**
Cash	$ 95,700	
Accounts Receivable	12,000	
Inventory	4,400	
Office Equipment	26,000	
Truck	18,000	
Accumulated Depreciation—Plant Assets		$ 6,000
Accounts Payable		5,500
Note Payable (Short-term)		10,000
Note Payable (Long-term)		33,000
Common Stock		100,000
Retained Earnings		
Dividends	1,000	
Sales Revenue		15,000
Cost of Goods Sold	3,600	
Rent Expense	2,000	
Advertising Expense	800	
Depreciation Expense	6,000	
	$ 169,500	$ 169,500

Transaction data for 2018	
Cash paid for purchase of office equipment	$ 6,000
Cash paid for purchase of truck	5,000
Acquisition of plant assets with a long-term notes payable	33,000
Cash payment of dividends	1,000
Cash receipt from issuance of common stock	100,000

Requirements

1. Complete the worksheet for the James Island Clothing Company, filling in the Transaction Analysis columns. Note: Some of the input cells marked in blue may not require entries.
2. Prepare the James Island Clothing Company statement of cash flows for the year ended December 31, 2018. Use the indirect method.

> Continuing Problem

P14-47 Preparing the statement of cash flows—indirect method

This problem continues the Canyon Canoe Company situation from Chapter 13. Canyon Canoe Company's comparative balance sheet is shown below. 2019 amounts are assumed, but include several transactions from prior chapters.

CANYON CANOE COMPANY Comparative Balance Sheet December 31, 2018 and 2019		
	2019	2018
Assets		
Current Assets:		
Cash	$ 523,693	$ 12,125
Short-term Investments, net	23,840	0
Accounts Receivable, net	2,422	7,600
Merchandise Inventory	355	0
Office Supplies	60	165
Prepaid Rent	0	2,000
Property, Plant, and Equipment:		
Land	155,000	85,000
Building	610,000	35,000
Canoes	12,000	12,000
Office Furniture and Equipment	150,000	0
Accumulated Depreciation—PP&E	(35,180)	(850)
Total Assets	**$ 1,442,190**	**$ 153,040**
Liabilities		
Current Liabilities:		
Accounts Payable	$ 5,195	$ 3,050
Utilities Payable	745	295
Telephone Payable	700	325
Wages Payable	4,250	1,250
Notes Payable	15,000	0
Interest Payable	350	50
Unearned Revenue	500	350
Long-term Liabilities:		
Notes Payable	7,200	7,200
Mortgage Payable	405,000	0
Bonds Payable	210,000	0
Discount on Bonds Payable	(1,270)	0
Total Liabilities	647,670	12,520
Stockholders' Equity		
Paid-In Capital:		
Preferred Stock	60,000	0
Paid-In Capital in Excess of Par—Preferred	10,000	0
Common Stock	186,000	136,000
Paid-In Capital in Excess of Par—Common	150,000	0
Retained Earnings	388,520	4,520
Total Stockholders' Equity	794,520	140,520
Total Liabilities and Stockholders' Equity	**$ 1,442,190**	**$ 153,040**

CHAPTER 14

Additional data follow:

1. The income statement for 2019 included the following items:
   a. Net income, $417,000.
   b. Depreciation expense for the year, $34,330.
   c. Amortization on the bonds payable, $254.
2. There were no disposals of property, plant and equipment during the year. All acquisitions of PP&E were for cash except the land, which was acquired by issuing preferred stock.
3. The company issued bonds payable with a face value of $210,000, receiving cash of $208,476.
4. The company distributed 4,000 shares of common stock in a stock dividend when the market value was $4.50 per share. All other dividends were paid in cash.
5. The common stock, except for the stock dividend, was issued for cash.
6. The cash receipt from the notes payable in 2019 is considered a financing activity because it does not relate to operations.

Requirement

Prepare the statement of cash flows for the year ended December 31, 2019, using the indirect method.

> Tying It All Together Case 14-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Amazon.com, Inc.'s 2015 annual report (http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-reportsAnnual).

Amazon.com, Inc. serves its customers through its retail Web sites, selling millions of unique products. In addition, the company manufactures and sells electronic devices including Kindle e-readers and Fire tablets. Amazon.com also offers Amazon Prime, a membership program that includes unlimited free shipping on items and access to unlimited streaming of movies and TV episodes.

Requirements

1. Review Item 7 (Management's Discussion and Analysis of Financial Condition and Results of Operations) included in the 2015 Annual Report. What does Amazon.com, Inc. state is the company's financial focus? What are free cash flows and how does Amazon.com plan to increase its free cash flows?
2. Review the statement of cash flows for Amazon.com, Inc. What type of noncash adjustments to net income did Amazon.com report in 2015?
3. Review the 2015 statement of cash flows for Amazon.com, Inc. What was the net cash provided (used) for investing activities? What were the cash inflows and outflows related to this section?
4. Review the 2015 statement of cash flows for Amazon.com, Inc. What was the net cash provided (used) for financing activities? What were the cash inflows and outflows related to this section?

> Decision Case 14-1

Theater by Design and Show Cinemas are asking you to recommend their stock to your clients. Because Theater by Design and Show Cinemas earn about the same net income and have similar financial positions, your decision depends on their statement of cash flows, summarized as follows:

	Theater by Design		Show Cinemas	
Net Cash Provided by Operating Activities		$ 30,000		$ 70,000
Cash Provided by (Used for) Investing Activities:				
Purchase of Plant Assets	$ (20,000)		$ (100,000)	
Sale of Plant Assets	40,000	20,000	10,000	(90,000)
Cash Provided by (Used for) Financing Activities:				
Issuance of Common Stock		0		30,000
Payment of Long-term Debt		(40,000)		0
Net Increase (Decrease) in Cash		$ 10,000		$ 10,000

Based on their cash flows, which company looks better? Give your reasons.

> Ethical Issue 14-1

Moss Exports is having a bad year. Net income is only $60,000. Also, two important overseas customers are falling behind in their payments to Moss, and Moss's accounts receivable are ballooning. The company desperately needs a loan. The Moss Exports Board of Directors is considering ways to put the best face on the company's financial statements. Moss's bank closely examines cash flow from operating activities. Daniel Peavey, Moss's controller, suggests reclassifying the receivables from the slow-paying clients as long-term. He explains to the board that removing the $80,000 increase in accounts receivable from current assets will increase net cash provided by operations. This approach may help Moss get the loan.

Requirements

1. Using only the amounts given, compute net cash provided by operations, both without and with the reclassification of the receivables. Which reporting makes Moss look better?
2. Under what condition would the reclassification of the receivables be ethical? Unethical?

> Financial Statement Case 14-1

Details about a company's cash flows appear in a number of places in the annual report. Use **Target Corporation's** Fiscal 2015 Annual Report to answer the following questions. Visit **http://www.pearsonhighered.com/Horngren** to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. Which method does Target use to report net cash flows from *operating* activities? How can you tell?
2. Target earned net income during 2015. Did operations *provide* cash or *use* cash during 2015? Give the amount. How did net cash provided by (used for) operations during 2015 compare with net income in 2015?
3. For the year ended January 30, 2016 (fiscal year 2015), did Target pay cash dividends? If so, how much?
4. For the year ended January 30, 2016, did Target use cash to purchase property, plant, and equipment? If so, how much?

> Quick Check Answers

1. d **2.** d **3.** b **4.** a **5.** d **6.** c **7.** c **8.** c **9A.** d **10B.** a

Chapter 14
The Statement of Cash Flows

Review Questions

1. The statement of cash flows reports on a business's cash receipts and cash payments for a specific period.

2. The statement of cash flows helps users do the following:

- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

3. The three basic types of cash flow activities are: operating, investing, and financing. Operating activities are ones that create revenue or expenses in the entity's business. Investing activities increase or decrease long-term assets. Financing activities include cash inflows and outflows involved with long-term liabilities and equity.

4. Investing and financing transactions that do not involve cash are called non-cash investing and financing activities. Examples of these non-cash investing and financing activities include issuing stock in exchange for plant assets, retirement of debt by issuing stock, or purchasing plant assets with long-term notes payable.

5. The two formats for reporting the operating activities section are the indirect and direct methods. The indirect method starts with net income and adjusts it to net cash provided by operating activities. The direct method restates the income statement in terms of cash. It shows all the cash receipts and cash payments from operating activities.

6. The five steps used to prepare the statement of cash flows by the indirect method are:

- **STEP 1:** Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also, adjust for gains or losses on long-term assets and non-cash expenses such as depreciation expense.
- **STEP 2:** Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.
- **STEP 3: C**omplete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.
- **STEP 4:** Compute the net increase or decrease in cash during the year. The change in cash is the key reconciling figure for the statement of cash flows and must match the change in cash reported on the comparative balance sheet.
- **STEP 5:** Prepare a separate schedule reporting any non-cash investing and financing activities.

7. Depreciation expense, depletion expense, and amortization expense all impact the income statement decreasing net income. None of these use cash at the time they are expensed, these expenses occurred when the asset was purchased. Therefore, to go from net income to cash flows, depreciation must be removed by adding it back to net income.

8. A loss on disposal of long-term assets would be removed from the net income on the statement of cash flows by adding it back in the operating section. The loss was originally included in net income, but the cash from the sale needs to be shown in the investing section of the statement of cash flows.

9. An increase in a current asset other than cash causes a decrease adjustment to net income in the operating activities section of the statement of cash flows. A decrease in a current asset other than cash causes an increase adjustment to net income.

10. An increase in current liabilities causes an increase adjustment to net income in the operating activities section of the statement of cash flows. A decrease in current liabilities causes a decrease adjustment to net income.

11. The long-term asset accounts must be evaluated when completing the investing activities section of the statement of cash flows.

12. The long-term liability accounts and the equity accounts must be evaluated when completing the financing activities section of the statement of cash flows.

13. The net change in the cash section of the statement of cash flows reconciles the statement of cash flows. It is computed by combining the cash provided for or used by operating, investing, and financing activities. This amount should equal the change in cash on the balance sheet.

14. Free cash flow is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying dividends to shareholders. It is calculated as: Net cash provided by operating activities – Cash planned for investments in long-term assets – Cash dividends.

15A. In the indirect method, start with net income and then adjust it to cash basis through a series of adjusting items. When calculating the direct method, take each line item of the income statement and convert it from accrual to cash basis.

16B. Companies face complex situations, and a spreadsheet can help in preparing the cash flow statement. It details the balance sheet accounts' beginning and ending balances as well as the debit and credit amounts to each account.

Short Exercises

S14-1

a. The statement of cash flows helps predict future cash flows by reporting past cash receipts and payments, which are good predictors of future cash flows.
b. The statement of cash flows helps evaluate management decisions by reporting on managers' investments. Good decisions will benefit the company's performance.
c. The statement of cash flows helps predict the ability to make debt payments to lenders and pay dividends to stockholders by reporting where cash came from and how it was spent.

S14-2

a.	Operating	f.	Investing
b.	Financing	g.	Financing
c.	Investing	h.	Operating
d.	Operating	i.	Financing
e.	Non-cash	j.	Operating

S14-3

a.	O+	f.	O+
b.	F−	g.	O+
c.	O−	h.	O−
d.	F+	i.	O+
e.	O−	j.	I−

S14-4

DVR EQUIPMENT, INC. Statement of Cash Flows—Partial Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 43,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 6,000	
Increase in Accounts Receivable	(6,000)	
Decrease in Accounts Payable	(2,000)	(2,000)
Net Cash Provided by Operating Activities		$ 41,000

S14-5

WINDING ROAD CELLULAR Statement of Cash Flows—Partial Year Ended April 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 55,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Increase in current assets other than cash	(27,000)	
Decrease in current liabilities	(20,000)	(45,000)
Net Cash Provided by Operating Activities		$ 10,000

S14-6

WINDING ROAD CELLULAR Statement of Cash Flows Year Ended April 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 55,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Increase in Current Assets other than Cash	(27,000)	
Decrease in Current Liabilities	(20,000)	(45,000)
Net Cash Provided by Operating Activities		10,000
Cash Flows from Investing Activities:		
Cash Purchase of Equipment	(44,000)	
Cash Receipt from Sale of Land	27,000	
Net Cash Used for Investing Activities		(17,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	17,000	
Cash Payment of Dividends	(5,800)	
Net Cash Provided by Financing Activities		11,200
Net Increase (Decrease) in Cash		4,200
Cash Balance, April 30, 2017		48,000
Cash Balance, April 30, 2018		$ 52,200

S14-7
Requirement 1

Plant Assets			
12/31/2017	84,350		
Acquisitions	***21,000***	0	Disposals
12/31/2018	105,350		

Requirement 2

Notes Payable			
		12,000	12/31/2017
Payment	***7,400***	4,400	Issuance
		9,000	12/31/2018

S14-8

PRESTON MEDIA CORPORATION Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 19,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 11,000	
Increase in Accounts Receivable	(4,500)	
Increase in Accounts Payable	3,500	10,000
Net Cash Provided by Operating Activities		29,000
Cash Flows from Investing Activities:		
Cash Purchase of Plant Assets	(21,000)	
Net Cash Used for Investing Activities		(21,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	4,000	
Cash Receipt from Issuance of Notes Payable	4,400	
Cash Payment of Dividends	(7,900)	
Cash Payment of Notes Payable	(7,400)	
Net Cash Used for Financing Activities		(6,900)
Net Increase (Decrease) in Cash		1,100
Cash Balance, December 31, 2017		3,900
Cash Balance, December 31, 2018		$ 5,000

S14-8, cont.

Common Stock			
		23,000	12/31/2017
Retirement	0	4,000	Issuance
		27,000	12/31/2018

Retained earnings (let Dividends = X)

Beginning	+	Net Income	−	*Dividends*	=	Ending
$35,500	+	$19,000	−	*X*	=	$46,600
				X	=	$ 7,900

Retained Earnings			
		35,500	12/31/2017
		19,000	Net Income
Dividend	7,900		
		46,600	12/31/2018

S14-9
Requirement 1

Net income	$ 27,000
Plus Depreciation Expense	+ 16,000
Increase in Cash	$ 43,000

Requirement 2

Yes, there was a non-cash transaction for the company, the acquisition of building with a long-term note payable. It would be reported in the non-cash investing and financing activities section of the statement of cash flows or in a note.

Non-cash Investing and Financing Activities:	
Acquisition of building by issuing long-term notes payable	$119,000
Total non-cash Investing and Financing Activities	$119,000

S14-10

Net Cash provided by Operating Activities	$ 148,000
− Cash payments planned for Long-Term Assets	(77,000)
− Cash Dividends	(7,000)
= Free Cash Flow	$ 64,000

S14A-11

JELLY BEAN, INC Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 614,000	
Total Cash Receipts		$ 614,000
Payments:		
To Suppliers	(212,000)	
To Employees	(205,000)	
Total Cash Payments		(417,000)
Net Cash Provided by Operating Activities		197,000
Cash Flows from Investing Activities:		
Cash Purchase of Equipment	(148,000)	
Net Cash Used for Investing Activities		(148,000)
Cash Flows from Financing Activities:		
Cash Payment of Dividends	(57,000)	
Net Cash Used for Financing Activities		(57,000)
Net Increase (Decrease) in Cash		(8,000)
Cash Balance, December 31, 2017		58,000
Cash Balance, December 31, 2018		$ 50,000

S14A-12

AMY'S LEARNING CENTER Statement of Cash Flows—Partial Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 188,000	
Total Cash Receipts		$ 188,000
Payments:		
To Suppliers	(115,000)	
To Employees	(66,000)	
Total Cash Payments		(181,000)
Net Cash Provided (Used for) by Operating Activities		7,000

S14A-13

AMY'S LEARNING CENTER Statement of Cash Flows Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 188,000	
Total Cash Receipts		$ 188,000
Payments:		
To Suppliers	(115,000)	
To Employees	(66,000)	
Total Cash Payments		(181,000)
Net Cash Provided (Used for) by Operating Activities		7,000
Cash Flows from Investing Activities:		
Cash Receipts from sale of Land	58,000	
Cash Purchase of Equipment	(39,000)	
Net Cash Provided by Investing Activities		19,000
Cash Flows from Financing Activities:		
Cash Receipts from issuance of Stock	22,000	
Cash Payments of Notes Payable	(34,000)	
Cash Payment of Dividends	(7,500)	
Net Cash Used for Financing Activities		(19,500)
Net Increase (Decrease) in Cash		6,500
Cash Balance, June 30, 2017		41,000
Cash Balance, June 30, 2018		$ 47,500

S14A-14
Requirement 1

Net Sales Revenue	$ 134,000
+ Beginning Accounts Receivable	+ 42,000
− Ending Accounts Receivable	− 53,000
= Cash receipts from customers	$ 123,000

Requirement 2

Cost of Goods Sold	$ 79,000
− Beginning Merchandise Inventory	− 88,000
+ Ending Merchandise Inventory	+ 76,000
+ Beginning Accounts Payable	+ 38,000
− Ending Accounts Payable	− 42,000
Cash paid for merchandise inventory	$ 63,000

S14B-15

a. Debit
b. Credit
c. Credit
d. Credit
e. Debit
f. Debit

Exercises

E14-16

a. Investing
b. Financing
c. Operating
d. Operating
e. Investing & Operating (gain)
f. Financing
g. Non-cash investing and financing

E14-17

a. Financing
b. Financing
c. Operating
d. Investing
e. Operating
f. Financing
g. Non-cash investing and financing
h. Investing
i. Financing
j. Non-cash investing and financing
k. Operating

E14-18

a.	O+	i.	I+
b.	NIF	j.	F+
c.	F−	k.	O+
d.	NIF	l.	F−
e.	O+	m.	F+
f.	O+	n.	O+
g.	O−	o.	O+
h.	O−	p.	F−

E14-19

VINTAGE COLOR ENGRAVING Statement of Cash Flows—Partial Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 36,000
Adjustments to Reconcile Net Income to Net Cash		
Provided by Operating Activities:		
Depreciation Expense	$ 5,000	
Loss on Sale of Land	4,000	
Increase in current assets other than cash	(10,000)	
Decrease in current liabilities	(19,000)	(20,000)
Net Cash Provided by Operating Activities		$ 16,000

E14-20

CD SALES, INC. Statement of Cash Flows—Partial For Month Ended July 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 50,000
Adjustments to Reconcile Net Income to Net Cash		
Provided by Operating Activities:		
Depreciation Expense	$ 2,000	
Decrease in Accounts Receivable	3,500	
Increase in Merchandise Inventory	(10,000)	
Increase in Accounts Payable	4,000	(500)
Net Cash Provided by Operating Activities		$ 49,500

E14-21

BOOST PLUS, INC Statement of Cash Flows Year Ended September 30, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 53,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 27,000	
Decrease in Accounts Receivable	15,000	
Increase in Merchandise Inventory	(6,000)	
Increase in Accounts Payable	17,000	
Decrease in Accrued Liabilities	(8,000)	45,000
Net Cash Provided by Operating Activities		98,000
Cash Flows from Investing Activities:		
Acquisition of Plant Asset	(108,000)	
Cash Receipt from Sale of Land	20,000	
Net Cash Used for Investing Activities		(88,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	36,000	
Cash Payment of Notes Payable	(15,000)	
Cash Payment of Dividends	(5,000)	
Net Cash Provided by Financing Activities		16,000
Net Increase (Decrease) in Cash		26,000
Cash Balance, September 30, 2017		13,000
Cash Balance, September 30, 2018		$ 39,000
Non-cash Investing and Financing Activities:		
Acquisition of Plant Assets with Notes Payable		$ 16,000
Total Non-cash Investing and Financing Activities		$ 16,000

E14-22
Requirement 1

Retained Earnings (let Dividends = X)

Beginning	+	Net income	−	*Dividends*	=	Ending
$45,000	+	$60,000	−	*X*	=	$70,000
				X	=	$35,000

Retained Earnings

		45,000	Beginning
		60,000	Net Income
Dividend	35,000		
		70,000	Ending

Requirement 2

Plant Assets (let X = Cost of Assets Sold)

Beginning	+	Acquisitions	−	Sold	=	Ending
$124,500	+	$29,000	−	X	=	$134,500
				X	=	$19,000

Plant Assets

Beginning	124,500		
Acquisitions	29,000		
		19,000	*Sold*
Ending	134,500		

Accumulated Depreciation – Plant Assets

		21,500	Beginning
		17,000	Depreciation Expense
Sold	*12,000*		
		26,500	Ending

Book Value of Plant Asset Sold	$ 7,000
(Cost $19,000 – Acc. Depr. $12,000)	
Gain on Plant Asset Sold	5,000
Total Cash Receipt for Sale of Plant Assets	$ 12,000

E14-23
Requirement 1

Plant Assets

12/31/2017	216,400		
Acquisitions	***92,000***		
		47,900	Disposed of
12/31/2018	260,500		

Accumulated Depreciation—Plant Assets

		32,400	12/31/2017
		54,000	Depreciation Exp.
Disposed of	47,900		
		38,500	12/31/2018

Requirement 2

Notes Payable

		69,000	12/31/2017
		0	Issuance
Payment	***8,000***		
		61,000	12/31/2018

Requirement 3

Common Stock

		34,000	12/31/2017
		11,000	***Issuance***
Retirement	0		
		45,000	12/31/2018

Requirement 4

Retained Earnings

		230,000	12/31/2017
		107,000	Net Income
Dividend	***47,000***		
		290,000	12/31/2018

E14-24

ROUSE EXERCISE EQUIPMENT, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 107,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 54,000	
Increase in Accounts Receivable	(11,000)	
Decrease in Merchandise Inventory	11,000	
Increase in Accounts Payable	1,000	
Decrease in Salaries Payable	(2,000)	53,000
Net Cash Provided by Operating Activities		160,000
Cash Flows from Investing Activities:		
Acquisition of Plant Asset	(92,000)	
Cash Payment for Investments	(23,000)	
Net Cash Used for Investing Activities		(115,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	11,000	
Cash Payment of Notes Payable	(8,000)	
Cash Payment of Dividends	(47,000)	
Net Cash Used for Financing Activities		(44,000)
Net Increase (Decrease) in Cash		1,000
Cash Balance, December 31, 2017		16,000
Cash Balance, December 31, 2018		$ 17,000

E14-25

DIRTBIKES, INC. Statement of Cash Flows - Partial Year Ended December 31, 2018	
Non-cash Investing and Financing Activities:	
Acquisition of a Building by issuing Common Stock	$ 96,000
Acquisition of a Truck by issuing a Long-Term Note	29,000
Retirement of Short-term Note by issuing Common Stock	28,000
Total Non-cash Investing and Financing Activities	$ 153,000

E14-26

Net Cash provided by Operating Activities	$ 160,000
− Cash payments planned for Long-Term Assets	(148,000)
− Cash Dividends	(3,500)
= Free Cash Flow	$ 8,500

E14A-27

FOUR SEASONS PARTS
Statement of Cash Flows—Partial
Year Ended December 31, 2018

Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 116,000	
Dividends Received on Investments	5,000	
Total Cash Receipts		$ 121,000
Payments:		
To Suppliers	(51,000)	
To Employees	(34,000)	
For Interest	(17,000)	
For Income Tax	(16,000)	
Total Cash Payments		(118,000)
Net Cash Provided by Operating Activities		$ 3,000

E14A-28

VALUE CORPORATION Statement of Cash Flows Year Ended June 30, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 246,000	
Dividends Received on Investments	7,000	
Total Cash Receipts		$ 253,000
Payments:		
To Suppliers	(116,000)	
To Employees	(51,000)	
For Interest	(2,500)	
For Taxes	(7,500)	
Total Cash Payments		(177,000)
Net Cash Provided by Operating Activities		76,000
Cash Flows from Investing Activities:		
Cash Receipts from sale of Land	29,000	
Cash Purchase of Plant Assets	(102,000)	
Net Cash Used for Investing Activities		(73,000)
Cash Flows from Financing Activities:		
Cash Receipts from issuance of Stock	38,000	
Cash Payments of Notes Payable	(10,000)	
Cash Payment of Dividends	(9,000)	
Net Cash Provided by Financing Activities		19,000
Net Increase (Decrease) in Cash		22,000
Cash Balance, June 30, 2017		21,000
Cash Balance, June 30, 2018		$ 43,000

E14A-29
Requirement 1

Net Sales Revenue	$ 68,000
+ Beginning Accounts Receivable	+ 24,000
− Ending Accounts Receivable	− 20,000
= Cash receipts from customers	$ 72,000

Requirement 2

Cost of Goods Sold	$ 77,000
−Beginning Merchandise Inventory	− 29,000
+Ending Merchandise Inventory	+ 26,000
+Beginning Accounts Payable	+ 12,000
−Ending Accounts Payable	− 16,000
Cash paid for merchandise inventory	$ 70,000

E14A-30
Requirement 1

Net Sales Revenue	$ 25,118
+ Beginning Accounts Receivable	+ 615
− Ending Accounts Receivable	− 798
= Cash receipts from customers	$ 24,935

Requirement 2

Cost of Goods Sold	$ 18,074
− Beginning Merchandise Inventory	− 2,832
+ Ending Merchandise Inventory	+ 3,483
+ Beginning Accounts Payable	+ 1,364
− Ending Accounts Payable	− 1,547
Cash paid for Merchandise Inventory	$ 18,542

Requirement 3

Other Operating Expenses	$ 4,632
+ Beginning Accrued Liabilities	+ 851
− Ending Accrued Liabilities	− 938
= Cash paid for other operating expenses	$ 4,545

E14A-30, cont.
Requirement 4

Property and Equipment, net			
12/31/2017	3,437		
Acquisitions	***1,185***		
		271	Depreciation
12/31/2018	4,351		

Requirement 5

Long-Term Liabilities			
		461	12/31/2017
		16	***Issuance***
Payment	0		
		477	12/31/2018

Requirement 6

Common Stock			
		443	12/31/2017
		227	***Issuance***
Retirement	0		
		670	12/31/2018

Requirement 7

Retained Earnings			
		3,784	12/31/2017
		1,611	Net Income
Dividend	***374***		
		5,021	12/31/2018

E14B-31

BOOST PLUS, INC.
Statement of Cash Flows
Year Ended September 30, 2018

Panel A – Balance Sheet:	9/30/2017		Transaction Analysis DEBIT	CREDIT		9/30/2018
Cash	$ 13,000	(l)	26,000			$ 39,000
Accounts Receivable	61,000			15,000	(c)	46,000
Merchandise Inventory	88,000	(d)	6,000			94,000
Land	102,000			20,000	(h)	82,000
Plant Assets	90,000	(g)	108,000			214,000
		(g)	16,000			
Accumulated Depreciation	(34,000)			27,000	(b)	(61,000)
Total Assets	$ 320,000					$ 414,000
Accounts Payable	15,000			17,000	(e)	32,000
Accrued Liabilities	20,000	(f)	8,000			12,000
Notes Payable	15,000	(j)	15,000	16,000	(g)	16,000
Common Stock, no par	4,000			36,000	(i)	40,000
Retained Earnings	266,000	(k)	5,000	53,000	(a)	314,000
Total Liabilities and Stockholders' Equity	$ 320,000		$ 184,000	$ 184,000		$ 414,000

E14B-31, cont.

Panel B – Statement of Cash Flows:

Cash Flows from Operating Activities:				
Net Income	(a)	53,000		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense	(b)	27,000		
Decrease in Accounts Receivable	(c)	15,000		
Increase in Merchandise Inventory			6,000	(d)
Increase in Accounts Payable	(e)	17,000		
Decrease in Accrued Liabilities			8,000	(f)
Net Cash Provided by Operating Activities				
Cash Flows from Investing Activities:				
Cash Receipt from Sale of Land	(h)	20,000		
Cash Payment for Acquisition of Plant Assets			108,000	(g)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Receipt from Issuance of Common Stock	(i)	36,000		
Cash Payments of Notes Payable			15,000	(j)
Cash Payment of Dividends			5,000	(k)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash			26,000	(l)
Non-cash Investing and Financing Activities:				
Acquisition of a Plant Asset by issuing a Note Payable			16,000	(g)
Total Non-cash Investing and Financing Activities	(g)	16,000		
		$ 184,000	$ 184,000	

Problems (Group A)

P14-32A
Requirement 1

The purpose of the statement of cash flow is to report on the cash receipts and cash payments for a specific period. It will help users do the following:

- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

Requirement 2

AMERICAN RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,400 × $275)		$ 660,000
Expenses:		
Cost of Goods Sold	$ 250,000	
Salaries and Wages Expense	96,000	
Depreciation Expense ($53,000 / 5 years)	10,600	
Rent Expense	20,000	
Income Tax Expense	17,000	
Total Expenses		393,600
Net Income		$ 266,400

P14-32A, cont.
Requirement 3

AMERICAN RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$305,000	
Accounts Receivable ($660,000 × 15%)	99,000	
Merchandise Inventory	329,000	
Total current assets		$ 733,000
Property, Plant, and Equipment:		
Store Fixtures	53,000	
Accumulated Depreciation	(10,600)	
Total property, plant, and equipment		42,400
Total Assets		$ 775,400
Liabilities		
Current Liabilities:		
Accounts Payable ($239,000 − $139,000)	$ 100,000	
Salaries Payable	3,000	
Total current liabilities		$ 103,000
Total Liabilities		103,000
Stockholders' Equity		
Common Stock, no par		450,000
Retained Earnings		222,400
Total Stockholders' Equity		672,400
Total Liabilities and Stockholders' Equity		$ 775,400

P14-32A, cont.
Requirement 4

AMERICAN RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 266,400
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 10,600	
Increase in Accounts Receivable	(99,000)	
Increase in Merchandise Inventory	(329,000)	
Increase in Accounts Payable	100,000	
Increase in Salaries Payable	3,000	(314,400)
Net Cash Used by Operating Activities		(48,000)
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(53,000)	
Net Cash Used for Investing Activities		(53,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	450,000	
Cash Payment of Dividends	(44,000)	
Net Cash Provided by Financing Activities		406,000
Net Increase (Decrease) in Cash		305,000
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 305,000

P14-33A

MORGANSON, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 68,500
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 24,000	
Gain on Sale of Building	(4,500)	
Decrease in Accounts Receivable	5,600	
Increase in Merchandise Inventory	(8,000)	
Increase in Accounts Payable	2,400	
Decrease in Income Tax Payable	(2,000)	17,500
Net Cash Provided by Operating Activities		86,000
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(74,000)	
Cash Receipt from Sale of Building	58,500	
Net Cash Used for Investing Activities		(15,500)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	38,000	
Cash Receipt from Issuance of Notes Payable	62,000	
Cash Payment of Notes Payable	(46,100)	
Cash Payment of Dividends	(50,000)	
Net Cash Provided by Financing Activities		3,900
Net Increase (Decrease) in Cash		74,400
Cash Balance, December 31, 2017		25,000
Cash Balance, December 31, 2018		$ 99,400
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 119,000
Total Non-cash Investing and Financing Activities		$ 119,000

P14-34A

Requirement 1

ROLLING HILLS, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 96,400
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 14,400	
Increase in Accounts Receivable	(1,100)	
Decrease in Merchandise Inventory	11,700	
Increase in Accounts Payable	5,300	
Decrease in Accrued Liabilities	(1,600)	28,700
Net Cash Provided by Operating Activities		125,100
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(23,600)	
Net Cash Used for Investing Activities		(23,600)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	24,400	
Cash Payment of Notes Payable	(50,100)	
Cash Payment of Dividends	(64,600)	
Net Cash Used for Financing Activities		(90,300)
Net Increase (Decrease) in Cash		11,200
Cash Balance, December 31, 2017		15,700
Cash Balance, December 31, 2018		$ 26,900
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 21,100
Total Non-cash Investing and Financing Activities		$ 21,100

P14-34A
Requirement 1, cont.

Plant Assets

12/31/2017	114,650		
Acquisitions	***23,600***		
		13,410	Disposed of
12/31/2018	124,840		

Accumulated Depreciation—Plant Assets

		17,950	12/31/2017
		14,400	Depreciation Exp.
Disposed of	13,410		
		18,940	12/31/2018

Retained Earnings

		10,100	12/31/2017
		96,400	Net Income
Dividend	***64,600***		
		41,900	12/31/2018

Notes Payable

		108,000	12/31/2017
		21,100	Issuance
Payment	***50,100***		
		79,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

P14-35A
Requirement 1

JACKSON EDUCATIONAL SUPPLY Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 57,600
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 16,700	
Decrease in Accounts Receivable	6,700	
Increase in Merchandise Inventory	(2,200)	
Increase in Accounts Payable	2,000	
Decrease in Accrued Liabilities	(700)	22,500
Net Cash Provided by Operating Activities		80,100
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(54,700)	
Acquisition of Building for Cash	(98,000)	
Net Cash Used for Investing Activities		(152,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	105,000	
Cash Receipt from Issuance of Notes Payable	48,000	
Cash Payment of Dividends	(16,200)	
Net Cash Provided by Financing Activities		136,800
Net Increase (Decrease) in Cash		64,200
Cash Balance, December 31, 2017		23,500
Cash Balance, December 31, 2018		$ 87,700

Requirement 2

The company shows a strong cash flow. They are generating cash from their operations due primarily to net income. They are investing in Building and Equipment for their business and are financing it using the issuance of Common Stock and Notes Payable. The overall cash position increased over last year by $64,200.

Requirement 3

Net Cash provided by Operating Activities	$ 80,100
− Cash payments planned for Long-Term Assets	(152,700)
− Cash Dividends	(16,200)
= Free Cash Flow	$ (88,800)

P14A-36A
Requirement 1

BOUNDARY RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,200 × $450)		$ 990,000
Expenses:		
Cost of Goods Sold	$ 330,000	
Salaries and Wages Expense	80,000	
Depreciation Expense ($53,000 / 5 years)	10,600	
Rent Expense	13,000	
Income Tax Expense	24,000	
Total Expenses		457,600
Net Income		$ 532,400

P14A-36A, cont.
Requirement 2

BOUNDARY RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 690,500	
Accounts Receivable ($990,000 × 15%)	148,500	
Merchandise Inventory	170,000	
Total current assets		$ 1,009,000
Property, Plant, and Equipment		
Store Fixtures	53,000	
Accumulated Depreciation	(10,600)	
Total property, plant, and equipment		42,400
Total Assets		$ 1,051,400
Liabilities		
Current Liabilities:		
Accounts Payable ($240,000 − $160,000)	80,000	
Salaries Payable	4,000	
Total current liabilities		$ 84,000
Total Liabilities		84,000
Stockholders' Equity		
Common Stock, no par		475,000
Retained Earnings		492,400
Total Stockholders' Equity		967,400
Total Liabilities and Stockholders' Equity		$ 1,051,400

P14A-36A, cont.
Requirement 3

BOUNDARY RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers (2,200 × $450 × 0.85)		$ 841,500
Payments:		
To Suppliers	$ (433,000)	
To Employees ($80,000 − $4,000)	(76,000)	
For Income Taxes	(24,000)	(533,000)
Net Cash Provided by Operating Activities		308,500
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(53,000)	
Net Cash Used for Investing Activities		(53,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	475,000	
Cash Payment of Dividends	(40,000)	
Net Cash Provided by Financing Activities		435,000
Net Increase (Decrease) in Cash		690,500
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 690,500

Cash Payments to Suppliers	
For Inventory	$ 260,000
For Accounts Payable	160,000
For Rent	13,000
Total	$ 433,000

P14A-37A
Requirement 1

ROLLING HILLS, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 438,900	
Interest Received	8,700	$ 447,600
Payments:		
To Suppliers	(204,000)	
To Employees	(77,400)	
For Interest	(21,100)	
For Income Tax	(20,000)	(322,500)
Net Cash Provided by Operating Activities		125,100
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(23,600)	
Net Cash Used for Investing Activities		(23,600)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	24,400	
Cash Payment of Notes Payable	(50,100)	
Cash Payment of Dividends	(64,600)	
Net Cash Used for Financing Activities		(90,300)
Net Increase (Decrease) in Cash		11,200
Cash Balance, December 31, 2017		15,700
Cash Balance, December 31, 2018		$ 26,900
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 21,100
Total Non-cash Investing and Financing Activities		$ 21,100

P14A-37A, cont.
Requirement 1, cont.

Net Sales Revenue	$ 440,000
+ Beginning Accounts Receivable	+ 25,400
− Ending Accounts Receivable	− 26,500
= Cash receipts from customers	$ 438,900

Cost of Goods Sold	$ 209,200
−Beginning Merchandise Inventory	− 91,500
+Ending Merchandise Inventory	+ 79,800
+Beginning Accounts Payable	+ 30,400
−Ending Accounts Payable	− 35,700
Cash paid for merchandise inventory	$ 192,200

Other Operating Expenses	$ 10,200
+ Beginning Accrued Liabilities	+ 30,300
− Ending Accrued Liabilities	− 28,700
= Cash paid for other operating expenses	$ 11,800

Cash Payments to Suppliers	
For Inventory	$ 192,200
For Operating Expenses	11,800
Total	$ 204,000

P14A-37A, cont.
Requirement 1, cont.

Plant Assets

12/31/2017	114,650		
Acquisitions	***23,600***		
		13,410	Disposed of
12/31/2018	124,840		

Accumulated Depreciation—Plant Assets

		17,950	12/31/2017
		14,400	Depreciation Expense
Disposed of	13,410		
		18,940	12/31/2018

Retained Earnings

		10,100	12/31/2017
		96,400	Net Income
Dividend	***64,600***		
		41,900	12/31/2018

Notes Payable

		108,000	12/31/2017
		21,100	Issuance
Payment	***50,100***		
		79,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

P14B-38A

APPLETON GROUP, INC. **Statement of Cash Flows** **Year Ended December 31, 2018**							
	Balance		**Transaction Analysis**				**Balance**
Panel A – Balance Sheet:	**12/31/2017**		**DEBIT**	**CREDIT**			**12/31/2018**
Cash	$ 15,900			1,200	(m)		$ 14,700
Accounts Receivable	43,900			1,700	(c)		42,200
Merchandise Inventory	93,900	(d)	3,700				97,600
Land	17,000	(i)	25,200				42,200
Plant Assets	110,750	(h)	22,800	11,600	(g)		121,950
Accumulated Depreciation—Plant Assets	(16,450)	(g)	11,600	15,400	(b)		(20,250)
Total Assets	$ 265,000						$ 298,400
Accounts Payable	26,900	(e)	1,000				$ 25,900
Accrued Liabilities	22,700			1,800	(f)		24,500
Notes Payable	65,000	(j)	14,000				51,000
Total Liabilities	114,600						101,400
Common Stock, no par	130,700			8,200	(k)		138,900
Retained Earnings	19,700	(l)	28,300	66,700	(a)		58,100
Total Liabilities and Stockholders' Equity	$ 265,000		$ 106,600	$ 106,600			$ 298,400

P14B-38A, cont.

Panel B – Statement of Cash Flows:

Cash Flows from Operating Activities:				
Net Income	(a)	66,700		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense—Plant Assets	(b)	15,400		
Decrease in Accounts Receivable	(c)	1,700		
Increase in Merchandise Inventory			3,700	(d)
Decrease in Accounts Payable			1,000	(e)
Increase in Accrued Liabilities	(f)	1,800		
Net Cash Provided by Operating Activities				
Cash Flows from investing Activities:				
Cash Payment for Acquisition of Plant Assets			22,800	(h)
Cash Payment for Acquisition of Land			25,200	(i)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Payment of Notes Payable			14,000	(j)
Cash Receipt from Issuance of Common Stock	(k)	8,200		
Cash Payment of Dividends			28,300	(l)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash	(m)	1,200		
Non-cash Investing and Financing Activities:				
Disposal of Plant Asset at Book Value			11,600	(g)
Total Non-cash Investing and Financing Activities	(g)	11,600		
		$ 106,600	$ 106,600	

Problems (Group B)

P14-39B
Requirement 1

The purpose of the statement of cash flow is to report on the cash receipts and cash payments for a specific period. It will help users do the following:

- Predict future cash flows.
- Evaluate management decisions.
- Predict ability to pay debts and dividends.

Requirement 2

CLASSIC RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,800 × $325)		$ 910,000
Expenses:		
Cost of Goods Sold	$ 290,000	
Salaries and Wages Expense	82,000	
Depreciation Expense ($51,000 / 5 years)	10,200	
Rent Expense	18,000	
Income Tax Expense	17,000	
Total Expenses		417,200
Net Income		$ 492,800

P14-39B, cont.
Requirement 3

CLASSIC RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 795,500	
Accounts Receivable ($910,000 × 5%)	45,500	
Merchandise Inventory	193,000	
Total current assets		$ 1,034,000
Property, Plant, and Equipment		
Store Fixtures	51,000	
Accumulated Depreciation	(10,200)	
Total property, plant and equipment		40,800
Total Assets		$ 1,074,800
Liabilities		
Current Liabilities:		
Accounts Payable ($243,000 − $153,000)	$ 90,000	
Salaries Payable	5,000	
Total current liabilities		$ 95,000
Total Liabilities		95,000
Stockholders' Equity		
Common Stock, no par		525,000
Retained Earnings		454,800
Total Stockholders' Equity		979,800
Total Liabilities and Stockholders' Equity		$ 1,074,800

P14-39B, cont.
Requirement 4

CLASSIC RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 492,800
Adjustments to Reconcile Net Income to Net Cash		
Provided by Operating Activities:		
Depreciation Expense	$ 10,200	
Increase in Accounts Receivable	(45,500)	
Increase in Merchandise Inventory	(193,000)	
Increase in Accounts Payable	90,000	
Increase in Salaries Payable	5,000	(133,300)
Net Cash Provided by Operating Activities		359,500
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(51,000)	
Net Cash Used for Investing Activities		(51,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	525,000	
Cash Payment of Dividends	(38,000)	
Net Cash Provided by Financing Activities		487,000
Net Increase (Decrease) in Cash		795,500
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 795,500

P14-40B

BENSON, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 66,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 24,000	
Gain on Sale of Building	(4,500)	
Decrease in Accounts Receivable	4,500	
Increase in Merchandise Inventory	(4,000)	
Increase in Accounts Payable	1,900	
Decrease in Income Tax Payable	(2,200)	19,700
Net Cash Provided by Operating Activities		85,700
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(69,000)	
Cash Receipt from Sale of Building	65,500	
Net Cash Used for Investing Activities		(3,500)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	37,000	
Cash Receipt from Issuance of Notes Payable	68,000	
Cash Payment of Notes Payable	(47,100)	
Cash Payment of Dividends	(53,000)	
Net Cash Provided by Financing Activities		4,900
Net Increase (Decrease) in Cash		87,100
Cash Balance, December 31, 2017		18,000
Cash Balance, December 31, 2018		$ 105,100
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 123,000
Total Non-cash Investing and Financing Activities		$ 123,000

P14-41B

Requirement 1

SWEET VALLEY, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 107,500
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 14,500	
Increase in Accounts Receivable	(1,300)	
Decrease in Merchandise Inventory	12,000	
Increase in Accounts Payable	5,500	
Decrease in Accrued Liabilities	(1,900)	28,800
Net Cash Provided by Operating Activities		136,300
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(20,700)	
Net Cash Used for Investing Activities		(20,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	23,400	
Cash Payment of Notes Payable	(47,900)	
Cash Payment of Dividends	(80,200)	
Net Cash Used for Financing Activities		(104,700)
Net Increase (Decrease) in Cash		10,900
Cash Balance, December 31, 2017		15,400
Cash Balance, December 31, 2018		$ 26,300
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 20,900
Total Non-cash Investing and Financing Activities		$ 20,900

P14-41B, cont.
Requirement 1, cont.

Plant Assets

12/31/2017	108,330		
Acquisitions	***20,700***		
		13,240	Disposed of
12/31/2018	115,790		

Accumulated Depreciation—Plant Assets

		18,630	12/31/2017
		14,500	Depreciation Expense
Disposed of	13,240		
		19,890	12/31/2018

Retained Earnings

		4,800	12/31/2017
		107,500	Net Income
Dividend	***80,200***		
		32,100	12/31/2018

Notes Payable

		105,000	12/31/2017
		20,900	Issuance
Payment	***47,900***		
		78,000	12/31/2018

Requirement 2
I will be able to evaluate an investment with this information because I can see the business's cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

P14-42B
Requirement 1

ROBESON EDUCATIONAL SUPPLY Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		$ 63,600
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	$ 17,400	
Decrease in Accounts Receivable	7,300	
Increase in Merchandise Inventory	(1,400)	
Increase in Accounts Payable	1,500	
Decrease in Accrued Liabilities	(1,400)	23,400
Net Cash Provided by Operating Activities		87,000
Cash Flows from Investing Activities:		
Acquisition of Equipment for Cash	(54,400)	
Acquisition of Building for Cash	(103,000)	
Net Cash Used for Investing Activities		(157,400)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	111,000	
Cash Receipt from Issuance of Notes Payable	44,000	
Cash Payment of Dividends	(21,200)	
Net Cash Provided by Financing Activities		133,800
Net Increase (Decrease) in Cash		63,400
Cash Balance, December 31, 2017		20,500
Cash Balance, December 31, 2018		$ 83,900

Requirement 2

The company shows a strong cash flow. They are generating cash from their operations due primarily to net income. They are investing in Building and Equipment for their business and are financing it using the issuance of Common Stock and Notes Payable. The overall cash position increased over last year by $63,400.

Requirement 3

Net Cash provided by Operating Activities	$ 87,000
− Cash payments planned for Long-Term Assets	(157,400)
− Cash Dividends	(21,200)
= Free Cash Flow	$ (91,600)

P14A-43B
Requirement 1

DIVERSION RARE COINS Income Statement Year Ended December 31, 2018		
Revenue:		
Sales (2,700 × $400)		$ 1,080,000
Expenses:		
Cost of Goods Sold	$ 340,000	
Salaries and Wages Expense	97,000	
Depreciation Expense ($46,000 / 5 years)	9,200	
Rent Expense	18,000	
Income Tax Expense	18,000	
Total Expenses		482,200
Net Income		$ 597,800

P14A-43B, cont.
Requirement 2

DIVERSION RARE COINS Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	$ 712,000	
Accounts Receivable ($1,080,000 × 15%)	162,000	
Merchandise Inventory	208,000	
Total current assets		$ 1,082,000
Property, Plant and Equipment:		
Store Fixtures	46,000	
Accumulated Depreciation	(9,200)	
Total property, plant and equipment		36,800
Total Assets		$ 1,118,800
Liabilities		
Current Liabilities:		
Accounts Payable ($238,000 − $138,000)	$ 100,000	
Salaries Payable	6,000	
Total current liabilities		$ 106,000
Total Liabilities		106,000
Stockholders' Equity		
Common Stock, no par		$ 450,000
Retained Earnings		562,800
Total Stockholders' Equity		1,012,800
Total Liabilities and Stockholders' Equity		$ 1,118,800

P14A-43B, cont.
Requirement 3

DIVERSION RARE COINS Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers (2,700 × $400 × 0.85)		$ 918,000
Payments:		
To Suppliers	$ (466,000)	
To Employees ($97,000 − $6,000)	(91,000)	
For Income Taxes	(18,000)	(575,000)
Net Cash Provided by Operating Activities		343,000
Cash Flows from Investing Activities:		
Acquisition of Store Fixtures	(46,000)	
Net Cash Used for Investing Activities		(46,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	450,000	
Cash Payment of Dividends	(35,000)	
Net Cash Provided by Financing Activities		415,000
Net Increase (Decrease) in Cash		712,000
Cash Balance, December 31, 2017		0
Cash Balance, December 31, 2018		$ 712,000

Cash Payments to Suppliers	
For Inventory	$ 310,000
For Accounts Payable	138,000
For Rent	18,000
Total	$ 466,000

P14A-44B

Requirement 1

SWEET VALLEY, INC. Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Receipts:		
Collections from Customers	$ 443,700	
Interest Received	8,200	
		$ 451,900
Payments;		
To Suppliers	(197,700)	
To Employees	(77,400)	
For Interest	(21,100)	
For Income Tax	(19,400)	(315,600)
Net Cash Provided by Operating Activities		136,300
Cash Flows from Investing Activities:		
Acquisition of Plant Asset for Cash	(20,700)	
Net Cash Used for Investing Activities		(20,700)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	23,400	
Cash Payment of Notes Payable	(47,900)	
Cash Payment of Dividends	(80,200)	
Net Cash Used for Financing Activities		(104,700)
Net Increase (Decrease) in Cash		10,900
Cash Balance, December 31, 2017		15,400
Cash Balance, December 31, 2018		$ 26,300
Non-cash Investing and Financing Activities:		
Acquisition of Land by issuing Long-term Notes Payable		$ 20,900
Total Non-cash Investing and Financing Activities		$ 20,900

P14A-44B
Requirement 1, cont.

Net Sales Revenue	$ 445,000
+ Beginning Accounts Receivable	+ 25,100
− Ending Accounts Receivable	− 26,400
= Cash receipts from customers	$ 443,700

Cost of Goods Sold	$ 203,200
−Beginning Merchandise Inventory	− 91,300
+Ending Merchandise Inventory	+ 79,300
+Beginning Accounts Payable	+ 30,100
−Ending Accounts Payable	− 35,600
Cash paid for merchandise inventory	$ 185,700

Other Operating Expenses	$ 10,100
+ Beginning Accrued Liabilities	+ 30,800
− Ending Accrued Liabilities	− 28,900
= Cash paid for other operating expenses	$ 12,000

Cash Payments to Suppliers	
For Inventory	$ 185,700
For Operating Expenses	12,000
Total	$ 197,700

P14A-44B
Requirement 1, cont.

Plant Assets

12/31/2017	108,330		
Acquisitions	***20,700***		
		13,240	Disposed of
12/31/2018	115,790		

Accumulated Depreciation—Plant Assets

		18,630	12/31/2017
		14,500	Depreciation Expense
Disposed of	13,240		
		19,890	12/31/2018

Retained Earnings

		4,800	12/31/2017
		107,500	Net Income
Dividend	***80,200***		
		32,100	12/31/2018

Notes Payable

		105,000	12/31/2017
		20,900	Issuance
Payment	***47,900***		
		78,000	12/31/2018

Requirement 2

I will be able to evaluate an investment with this information because I can see the cash receipts and cash payments for a specific period. This information can help me predict future cash flows, evaluate management decisions, and predict the ability of the company to pay their debts and dividends.

P14-45B

ATTLEBORO GROUP, INC. Statement of Cash Flows Year Ended December 31, 2018						
Panel A – Balance Sheet:	**Balance 12/31/2017**		**Transaction Analysis DEBIT**	**CREDIT**		**Balance 12/31/2018**
Cash	$ 15,500			1,500	(m)	$ 14,000
Accounts Receivable	43,700			1,700	(c)	42,000
Merchandise Inventory	93,300	(d)	3,500			96,800
Land	11,000	(i)	25,400			36,400
Plant Assets	112,850	(h)	22,000	13,600	(g)	121,250
Accumulated Depreciation—Plant Assets	(18,650)	(g)	13,600	15,300	(b)	(20,350)
Total Assets	$ 257,700					$ 290,100
Accounts Payable	26,000	(e)	1,500			24,500
Accrued Liabilities	22,600			1,300	(f)	23,900
Notes Payable	69,000	(j)	13,000			56,000
Total Liabilities	117,600					104,400
Common Stock, no par	121,000			8,500	(k)	129,500
Retained Earnings	19,100	(l)	28,200	65,300	(a)	56,2000
Total Liabilities and Stockholders' Equity	$ 257,700		$ 107,200	$ 107,200		$ 290,100

P14-45B, cont.

Panel B – Statement of Cash Flows:				
Cash Flows from Operating Activities:				
Net Income	(a)	65,300		
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:				
Depreciation Expense—Plant Assets	(b)	15,300		
Decrease in Accounts Receivable	(c)	1,700		
Increase in Merchandise Inventory			3,500	(d)
Decrease in Accounts Payable			1,500	(e)
Increase in Accrued Liabilities	(f)	1,300		
Net Cash Provided by Operating Activities				
Cash Flows from investing Activities:				
Cash Payment for Acquisition of Plant Assets			22,000	(h)
Cash Payment for Acquisition of Land			25,400	(i)
Net Cash Used for Investing Activities				
Cash Flows from Financing Activities:				
Cash Payment of Notes Payable			13,000	(j)
Cash Receipt from Issuance of Common Stock	(k)	8,500		
Cash Payment of Dividends			28,200	(l)
Net Cash Provided by Financing Activities				
Net Increase (Decrease) in Cash	(m)	1,500		
Non-cash Investing and Financing Activities:				
Disposal of Plant Asset at Book Value			13,600	(g)
Total Non-cash Investing and Financing Activities	(g)	13,600		
		$ 107,200	$ 107,200	

Excel Skill Problem

P14-46

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P14-47

CANYON CANOE COMPANY Statement of Cash Flows Year Ended December 31, 2019		
Cash Flows from Operating Activities:		
Net Income		$ 417,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense	$ 34,330	
Amortization Expense	254	
Decrease in Accounts Receivable	5,178	
Increase in Merchandise Inventory	(355)	
Decrease in Office Supplies	105	
Decrease in Prepaid Rent	2,000	
Increase in Short-term Investments	(23,840)	
Increase in Accounts Payable	2,145	
Increase in Utilities Payable	450	
Increase in Telephone Payable	375	
Increase in Wages Payable	3,000	
Increase in Interest Payable	300	
Increase in Unearned Revenue	150	24,092
Net Cash Provided by Operating Activities		441,092
Cash Flows from Investing Activities:		
Acquisition of Building	(575,000)	
Acquisition of Office Furniture and Equipment	(150,000)	
Net Cash Used for Investing Activities		(725,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Common Stock	182,000	
Cash Receipt from Issuance of Notes Payable	15,000	
Cash Receipt from Issuance of Mortgage Payable	405,000	
Cash Receipt from Issuance of Bonds Payable	208,476	
Cash Payment of Dividends	(15,000)	
Net Cash Provided by Financing Activities		795,476
Net Increase (Decrease) in Cash		511,568
Cash Balance, December 31, 2018		12,125
Cash Balance, December 31, 2019		$ 523,693
Non-cash Investing and Financing Activities:		
Acquisition of land by issuing preferred stock		$70,000

Tying It All Together Case 14-1

Requirement 1
Amazon.com, Inc. states their financial focus is on long-term, sustainable growth in free cash flows per share. Free cash flows are the amount of cash available from operating activities after paying for planned investments in long-term assets and dividends. Amazon.com plans to increase its free cash flows by increasing operating income and efficiently managing working capital and cash capital expenditures.

Requirement 2
Amazon.com reported the following noncash adjustments to net income: depreciation, stock-based compensation, other operating expense (income), losses (gains) on sales of marketable securities, other expense (income), deferred income taxes, and excess tax benefits from stock-based compensation.

Requirement 3
The net cash used for investing activities was $6,450 million. This included the following inflows and outflows:

Purchases of property and equipment	$ (4,589)
Acquisitions, net of cash	(795)
Sales and maturities of marketable securities	3,025
Purchases of marketable securities	(4,091)

Requirement 4
The net cash used for financing activities was $3,763 million. This included the following inflows and outflows:

Excess tax benefits from stock-based compensation	$ 119
Proceeds from long-term debt and other	353
Repayments of long-term debt and other	(1,652)
Principal repayments of capital lease obligations	(2,462)
Principal repayments of finance lease obligations	(121)

Decision Case 14-1

Show Cinemas looks like a better investment because:

1. They have more cash provided from their operating activities. This is a key indicator when reviewing a cash flow statement. If a company cannot generate sufficient cash from operations, it can run into difficulty in the future.
2. They are investing in the company by purchasing Plant Assets. Theater by Design appears to be selling more Plant Assets than they are purchasing.
3. Show Cinemas has raised more cash by issuing Common Stock, which is a less risky source of capital. Theater by Design paid down its Long-term Debt which is also a favorable indicator for them.

Ethical Issue 14-1
Requirement 1

	Without Reclassification	With Reclassification
Net Income	$ 60,000	$60,000
Increase in Accounts Receivable	(80,000)	0
Net Cash Provided by Operating Activities	$(20,000)	$60,000

Moss Exports looks better with the reclassification of the Accounts Receivable from current assets to long-term.

Requirement 2

The reclassification would be unethical because it would be misleading on both the Statement of Cash Flows and on the Allowance for Doubtful Accounts on the Balance Sheet. Also if the terms of the agreement require the customer to pay within a short period of time, the assets would still be classified as short-term. One way to make the situation ethical would be to work with the clients and convert their accounts receivable into a note receivable with longer payment terms.

Financial Statement Case 14-1
Requirement 1

Target uses the indirect method to report net cash flows from operating activities. The section begins with net income and then adds back non-cash items and shows the changes in operating assets and liabilities.

Requirement 2

Target provided cash from operations in 2015 and 2014. Cash provided by operations was $5,844 million in 2015. Net income in 2015 was $3,363 million.

Requirement 3

Yes, Target paid $1,362 million in cash dividends for the year ended January 30, 2016.

Requirement 4

Yes, Target used $1,438 million to purchase property, and equipment for the year ended January 30, 2016.

15 Financial Statement Analysis

What Companies Should I Invest In?

Clara Wu misses her mom, Sylvia, a lot these days. Her mom always knew just the right words to say when Clara came to visit after a long hard day at work, and her mom's chocolate cookies always worked magic in making her feel better. Since her mom passed away six months ago, Clara has had to make a lot of decisions on her own. As executor of her mom's estate, she was responsible for helping the accountant and attorney finalize the financial details and the estate paperwork. Clara knew that once the estate was settled, she would be receiving a large amount of cash. She knew that deciding what to do with the cash would be a very important decision.

When Clara met with her financial planner, she shared her goals of paying off her student loans and other personal debt and then saving toward her retirement. She wanted to take the cash remaining after paying off her debts and invest it in the stock market. Clara was worried, though. She tried to stay current on the financial markets by reading the business section of the newspaper and listening to the financial news, but she wasn't sure how to decide which companies would be the best investment choices. Clara's financial planner advised her that there are a number of tools that she could use to evaluate companies and determine which company is more profitable. Other tools will be helpful in helping her determine trends across a period of time. Clara knew that with help from her financial planner and these tools she could make sense out of companies' financial statements and invest with a confidence that would make her mom proud.

What Are the Tools That Help Users Analyze a Business?

In this chapter, you learn about tools that allow users to see beyond the pure numbers on the financial statements and translate them into meaningful analysis. So far you have learned some of what it takes to prepare financial statements; now you will learn how to use financial statements to help manage a company effectively, make wise investments, and compare one company to another. Certified financial planners who work for companies, such as **Raymond James Financial, Inc.,** a financial services holding company that operates a full-service brokerage and investment firm headquartered in Florida, analyze financial statements to compare a company's performance across several periods of time. This comparison helps investors determine how a company is performing over time. In addition, financial planners use another tool, called *ratio analysis*, to measure one company against other companies in the same industry. Whether you will be an investor, an employee, or a manager of a company, knowing how to evaluate a company's performance accurately will help you make smart business decisions.

Chapter 15 Learning Objectives

1 Explain how financial statements are used to analyze a business

2 Perform a horizontal analysis of financial statements

3 Perform a vertical analysis of financial statements

4 Compute and evaluate the standard financial ratios

HOW ARE FINANCIAL STATEMENTS USED TO ANALYZE A BUSINESS?

Learning Objective 1
Explain how financial statements are used to analyze a business

In this chapter, we use what you have learned about financial statements to analyze Smart Touch Learning. We will determine if it was profitable, as well as its overall financial health.

Purpose of Analysis

Investors and creditors cannot evaluate a company by examining only one year's data. That is why most financial statements cover at least two periods. In fact, most financial analyses cover trends over three to five years. This chapter shows you how to use some of the analytical tools for charting a company's progress through time. These tools can be used by small business owners to measure performance, by financial analysts to analyze stock investments, by auditors to obtain an overall sense of a company's financial health, by creditors to determine credit risk, or by any other person wanting to compare financial data in relevant terms.

To accurately determine the financial performance of a company, such as Smart Touch Learning, we need to compare its performance in the following ways:

- from year to year
- with a competing company
- with the same industry as a whole

After this comparison, we will have a better idea of how to judge the company's present situation and predict what might happen in the near future.

Tools of Analysis

There are three main ways to analyze financial statements:

- Horizontal analysis provides a year-to-year comparison of a company's performance in different periods.
- Vertical analysis provides a way to compare different companies.
- Ratio analysis can be used to provide information about a company's performance. It is used most effectively to measure a company against other companies in the same industry and to denote trends within the company.

Corporate Financial Reports

Before we discuss the different tools available for financial statement analysis, let's review corporate financial reports.

Annual Report
Provides information about a company's financial condition.

Publicly traded corporations have their stock listed on public stock exchanges, such as the New York Stock Exchange or the NASDAQ. They are required by the Securities and Exchange Commission (SEC) to file annual and quarterly reports (also called a *Form 10-K* and *Form 10-Q*). An **annual report** provides information about a company's financial condition. These reports help investors make informed investment decisions.

Business Overview

A typical annual report begins with an overview of the business—including the industry the company is in, its growth strategy, and an overview of the company's brands. It also often discusses the company's competitors and the risks related to the company's business.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)
The section of the annual report that is intended to help investors understand the results of operations and the financial condition of the company.

Another part of the annual report is **management's discussion and analysis of financial condition and results of operations (MD&A).** This section of the annual report is intended to help investors understand the results of operations and the financial condition of the company. It is important to realize that this section is written by the company and could present a biased view of the company's financial condition and results. This section of the report is the company's attempt to explain its financial statements and to discuss its performance.

The MD&A section is of interest to investors, though, because it often contains information that is not found in the financial data. Such information might include how a company is planning to spend its cash during the next year for property, plant, and equipment or whether significant changes are expected to occur that would cause revenue or expenses to increase or decrease in the future. This section often provides forward-looking information that can be useful to investors who are trying to estimate what future earnings will be for the company.

Report of Independent Registered Public Accounting Firm

A report of the independent registered public accounting firm (often referred to as the *auditor's report*) is included in an annual report. The audit report attests to the fairness of the presentation of the financial statements and states whether the financial statements are presented in accordance with Generally Accepted Accounting Principles (GAAP). This report is prepared by an independent external auditor who has performed an audit on the financial statements. In addition, the external auditor is responsible for assessing the effectiveness of the company's internal controls.

Most audit reports have *unqualified opinions*, which means that the financial statements are presented fairly, in all material respects. A *qualified opinion* might be issued if the financial statements include a departure from GAAP. If the auditor finds that the financial statements are not represented fairly, an *adverse opinion* would be given.

DECISIONS

Should an unqualified opinion be issued?

Patty Schneider was performing the independent audit for Drake Storage, Inc. Patty was reviewing the work that her staff auditors had completed, and she had several concerns about the company's financial statements. Patty's staff had determined that Drake had underreported its cost of goods sold in order to overstate net income. Patty had spoken to Drake Storage's audit committee and discussed her concerns. The audit committee disagreed with the accounting firm's findings. What should Patty do?

Solution

Patty's accounting firm should issue either a qualified opinion or an adverse opinion. To issue an unqualified opinion stating that the financial statements are presented fairly in all material respects would be misleading to investors and creditors. As an independent auditor, Patty's primary responsibility is to report on the fairness of the financial statements and assure the public that the financial statements are presented in accordance with GAAP. If they are not, her firm has a responsibility to issue either a qualified or adverse opinion.

Financial Statements

An annual report contains the four basic financial statements you have learned in this textbook: the balance sheet (sometimes referred to as *statement of financial position)*, the income statement (or *statement of operations*), the statement of stockholders' equity, and the statement of cash flows. Corporations are required to report multiple-period information for all financial statements. For example, the **Kohl's Corporation** 2015 Annual Report presents financial data for the past three fiscal periods (2015, 2014, and 2013).

Notes to Financial Statements

Immediately following the financial statements are the notes to the financial statements. These notes include a summary of significant accounting policies and explanations of specific items on the financial statements. These notes are an important part of the financial statements and are often referred to by investors to understand the information included in the financial statements.

Try It!

Match the different parts of the annual report with the appropriate description.

1. Includes the income statement, balance sheet, statement of stockholders' equity, and statement of cash flows.
2. Attests to the fairness of the presentation of the financial statements.
3. Includes a summary of significant accounting policies and explanations of specific items on the financial statements.
4. Is written by the company to help investors understand the results of operations and the financial condition of the company.

a. Notes to financial statements
b. Report of independent registered public accounting firm
c. Management's discussion and analysis of financial condition and results of operations (MD&A)
d. Financial statements

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercise S15-1. MyAccountingLab

HOW DO WE USE HORIZONTAL ANALYSIS TO ANALYZE A BUSINESS?

Learning Objective 2
Perform a horizontal analysis of financial statements

Many decisions hinge on whether the numbers—sales, expenses, and net income, for example—are increasing or decreasing. For example, have sales and other revenues risen from last year? By how much?

Sales may have increased, but considered in isolation, this fact is not very helpful. The *percentage change* in sales over time is more relative and, therefore, more helpful. For example, if a company had sales of $100,000 one year and sales increased by $50,000 the next year, that would be a significant increase. However, if the company had sales of $1 billion and sales increased by $50,000, that would not be significant. Therefore, it is often more relevant to know the percentage increase than the dollar increase.

Horizontal Analysis
The study of percentage changes in line items from comparative financial statements. (Dollar amount of change / Base period amount) × 100.

The study of percentage changes in line items from comparative financial statements is called **horizontal analysis**. Horizontal analysis compares the change in each financial statement item from one year to the next. Computing a percentage change in comparative statements requires two steps:

1. Compute the dollar amount of the change in a line item from the earlier period to the later period.
2. Divide the dollar amount of change by the earlier period amount, and multiply by 100. We call the earlier period the base period.

Horizontal analysis is illustrated for Smart Touch Learning as:

			Increase (Decrease)	
	2020	2019	Amount	Percentage
Net Sales Revenue	$858,000	$803,000	$55,000	6.8%

Smart Touch Learning's net sales revenue increased by 6.8% during 2020, computed as follows:

Step 1: Compute the dollar amount of change in sales from 2019 to 2020:

Dollar amount of change = Later period amount − Earlier period amount
= $858,000 − $803,000
= $55,000

Step 2: Divide the dollar amount of change by the base period amount and multiply by 100. This computes the percentage change for the period:

Horizontal analysis % = (Dollar amount of change / Base period amount) × 100
= ($55,000 / $803,000) × 100
= 6.8%*

*All percentage calculations are rounded to the nearest tenth for the rest of this chapter.

Horizontal Analysis of the Income Statement

The horizontal analysis of Smart Touch Learning's income statement is shown in Exhibit 15-1. This comparative income statement reveals a significant amount of growth during 2020. Net sales revenue increased by 6.8% while Cost of Goods Sold increased by only 0.8%, resulting in a 17.3% increase in gross profit. Additionally, Smart Touch Learning was able to control its operating expenses, creating a 77.2% growth in operating income.

Two items on Smart Touch Learning's income statement with the slowest growth rates are Cost of Goods Sold and Administrative Expenses. Cost of Goods Sold increased by only 0.8%, and administrative expenses decreased by 4.1%. On the bottom line, net income grew by an incredible 84.6%. That is real progress!

Exhibit 15-1 | Comparative Income Statement—Horizontal Analysis

SMART TOUCH LEARNING Income Statement Years Ended December 31, 2020 and 2019				
			Increase (Decrease)	
	2020	2019	Amount	Percentage
Net Sales Revenue	$ 858,000	$ 803,000	$ 55,000	6.8%
Cost of Goods Sold	513,000	509,000	4,000	0.8
Gross Profit	345,000	294,000	51,000	17.3
Operating Expenses:				
Selling Expenses	126,000	114,000	12,000	10.5
Administrative Expenses	118,000	123,000	(5,000)	(4.1)
Total Operating Expenses	244,000	237,000	7,000	3.0
Operating Income	101,000	57,000	44,000	77.2
Other Income and (Expenses):				
Interest Revenue	4,000	0	4,000	—
Interest Expense	(24,000)	(14,000)	10,000	71.4
Total Other Income and (Expenses)	(20,000)	(14,000)	6,000	42.9
Income Before Income Taxes	81,000	43,000	38,000	88.4
Income Tax Expense	33,000	17,000	16,000	94.1
Net Income	$ 48,000	$ 26,000	$ 22,000	84.6%

Horizontal Analysis of the Balance Sheet

Horizontal analysis of Smart Touch Learning's comparative balance sheet is shown in Exhibit 15-2 (on the next page). This analysis also shows growth in assets, with total assets increasing by 22.2%. Notice that both Cash and Cash Equivalents and Prepaid Expenses decreased during the year, but these decreases were offset by increases in other assets.

Smart Touch Learning's total liabilities also grew. Total liabilities increased by 33.0% but notice that Accrued Liabilities decreased by 12.9%, as indicated by the percentage in parentheses. This is another indicator of positive growth for Smart Touch Learning because it implies the corporation is using debt to grow the company. Accrued liabilities actually decreased, as indicated by the liability figures in parentheses.

Exhibit 15-2 | **Comparative Balance Sheet—Horizontal Analysis**

SMART TOUCH LEARNING Balance Sheet December 31, 2020 and 2019				
			Increase (Decrease)	
	2020	2019	Amount	Percentage
Assets				
Current Assets:				
Cash and Cash Equivalents	$ 29,000	$ 32,000	$ (3,000)	(9.4)%
Accounts Receivable, Net	114,000	85,000	29,000	34.1
Merchandise Inventory	113,000	111,000	2,000	1.8
Prepaid Expenses	6,000	8,000	(2,000)	(25.0)
Total Current Assets	262,000	236,000	26,000	11.0
Property, Plant, and Equipment, Net	507,000	399,000	108,000	27.1
Long-term Investments	18,000	9,000	9,000	100.0
Total Assets	$ 787,000	$ 644,000	$ 143,000	22.2%
Liabilities				
Current Liabilities:				
Accounts Payable	$ 73,000	$ 68,000	$ 5,000	7.4%
Accrued Liabilities	27,000	31,000	(4,000)	(12.9)
Notes Payable	42,000	27,000	15,000	55.6
Total Current Liabilities	142,000	126,000	16,000	12.7
Long-term Liabilities	289,000	198,000	91,000	46.0
Total Liabilities	431,000	324,000	107,000	33.0
Stockholders' Equity				
Common Stock, no par	186,000	186,000	0	0.0
Retained Earnings	170,000	134,000	36,000	26.9
Total Stockholders' Equity	356,000	320,000	36,000	11.3
Total Liabilities and Stockholders' Equity	$ 787,000	$ 644,000	$ 143,000	22.2%

Trend Analysis

Trend Analysis
A form of horizontal analysis in which percentages are computed by selecting a base period as 100% and expressing amounts for following periods as a percentage of the base period amount. (Any period amount / Base period amount) × 100.

Trend analysis is a form of horizontal analysis. Trend percentages indicate the direction a business is taking. For example, how have sales changed over a five-year period? What trend does net income show? These questions can be answered by trend analysis over a period, such as three to five years.

Trend analysis percentages are computed by selecting a base period (for example, the earliest year). The base period amounts are set equal to 100%. The amounts for each subsequent year are expressed as a percentage of the base amount. To compute trend analysis percentages, we divide each item for the following years by the base period amount and multiply by 100.

Trend % = (Any period amount / Base period amount) × 100

Assume Smart Touch Learning's Net Sales Revenue were $750,000 in 2016 and rose to $858,000 in 2020. To illustrate trend analysis, review the trend of net sales revenue during 2016–2020. The base year is 2016, the earliest year, so that year's percentage is set equal to 100.

	2020	2019	2018	2017	2016
Net Sales Revenue	$ 858,000	$ 803,000	$ 780,000	$ 748,000	$ 750,000
Trend Percentages	114.4%	107.1%	104.0%	99.7%	100.0%

We want percentages for the five-year period 2016–2020. We compute these by dividing each year's net sales revenue amount by the 2016 net sales revenue amount and multiply by 100. For example, the trend percentage for 2017 is calculated as follows:

$$\begin{aligned} \text{Trend \%} &= (\text{Any period amount / Base period amount}) \times 100 \\ &= (\$748{,}000 / \$750{,}000) \times 100 \\ &= 99.7\% \end{aligned}$$

What is the difference between horizontal analysis and trend analysis?

Notice that net sales revenue decreased slightly in 2017, and then the rate of growth increased from 2018–2020. You can perform a trend analysis on any one or multiple item(s) you consider important. Trend analysis is widely used to predict the future health of a company.

Trend analysis and horizontal analysis are very similar, but they can be used to indicate different things for a company. **Horizontal analysis allows a company to see the percentage change from one year to the next. Trend analysis shows the percentage change from a base year forward to determine whether the trend in net sales revenue, for example, is positive or negative over a longer period of time.**

Try It!

5. Freedom Corp. reported the following on its comparative income statement:

(In millions)	**2019**	**2018**
Net Sales Revenue	$ 10,000	$ 8,000
Cost of Goods Sold	4,500	3,000

Prepare a horizontal analysis of net sales revenue, cost of goods sold, and gross profit—both in dollar amounts and in percentages.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S15-2 and S15-3. MyAccountingLab

HOW DO WE USE VERTICAL ANALYSIS TO ANALYZE A BUSINESS?

Learning Objective 3

Perform a vertical analysis of financial statements

As you have seen, horizontal analysis and trend analysis percentages highlight changes in an item from year to year, or over *time*. But no single technique gives a complete picture of a business, so we also need vertical analysis.

Vertical Analysis
An analysis of a financial statement that reveals the relationship of each statement item to its base amount, which is the 100% figure. (Specific item / Base amount) × 100.

Vertical analysis of a financial statement shows the relationship of each item to its base amount, which is the 100% figure. Every other item on the statement is then reported as a percentage of that base. For the income statement, net sales revenue is the base. For the balance sheet, total assets is the base.

$$\text{Vertical analysis \%} = (\text{Specific item} / \text{Base amount}) \times 100$$

Vertical Analysis of the Income Statement

Exhibit 15-3 shows the completed vertical analysis of Smart Touch Learning's 2020 and 2019 comparative income statement.

Exhibit 15-3 | **Comparative Income Statement—Vertical Analysis**

SMART TOUCH LEARNING
Income Statement
Years Ended December 31, 2020 and 2019

	2020	Percent of Total	2019	Percent of Total
Net Sales Revenue	$ 858,000	100.0%	$ 803,000	100.0%
Cost of Goods Sold	513,000	59.8	509,000	63.4
Gross Profit	345,000	40.2	294,000	36.6
Operating Expenses:				
Selling Expenses	126,000	14.7	114,000	14.2
Administrative Expenses	118,000	13.8	123,000	15.3
Total Operating Expenses	244,000	28.4	237,000	29.5
Operating Income	101,000	11.8	57,000	7.1
Other Income and (Expenses):				
Interest Revenue	4,000	0.5	0	0.0
Interest Expense	(24,000)	(2.8)	(14,000)	(1.7)
Total Other Income and (Expenses)	(20,000)	(2.3)	(14,000)	(1.7)
Income Before Income Taxes	81,000	9.4	43,000	5.4
Income Tax Expense	33,000	3.8	17,000	2.1
Net Income	$ 48,000	5.6%	$ 26,000	3.2%

The vertical analysis percentage for Smart Touch Learning's cost of goods sold is 59.8% of net sales revenue (($513,000 / $858,000) × 100 = 59.8%) in 2020 and 63.4% (($509,000 / $803,000) × 100 = 63.4%) in 2019. This means that for every $1 in net sales revenue, almost $0.60 in 2020 and approximately $0.63 in 2019 is spent on cost of goods sold. This percentage decrease in cost of goods sold helps explain the percentage increase in gross profit as calculated in the horizontal analysis in Exhibit 15-1. Smart Touch Learning was able to decrease the cost of goods sold by more than $0.03 for every $1 of net sales revenue.

Smart Touch Learning's net income is 5.6% of net sales revenue in 2020 and 3.2% of net sales revenue in 2019. That improvement from 2019 to 2020 is extremely good. Suppose under normal conditions a company's net income is 10% of revenues. A drop to 4% may cause the investors to be alarmed and sell their stock.

Vertical Analysis of the Balance Sheet

Exhibit 15-4 depicts the vertical analysis of Smart Touch Learning's balance sheet. The base amount (100%) is total assets. The base amount is also total liabilities and stockholders' equity because they are exactly the same number (remember the accounting equation); in 2020, that's $787,000.

Exhibit 15-4 | Comparative Balance Sheet—Vertical Analysis

SMART TOUCH LEARNING
Balance Sheet
December 31, 2020 and 2019

	2020	Percent of Total	2019	Percent of Total
Assets				
Current Assets:				
Cash and Cash Equivalents	$ 29,000	3.7%	$ 32,000	5.0%
Accounts Receivable, Net	114,000	14.5	85,000	13.2
Merchandise Inventory	113,000	14.4	111,000	17.2
Prepaid Expenses	6,000	0.8	8,000	1.2
Total Current Assets	262,000	33.3	236,000	36.6
Property, Plant, and Equipment, Net	507,000	64.4	399,000	62.0
Long-term Investments	18,000	2.3	9,000	1.4
Total Assets	$ 787,000	100.0%	$ 644,000	100.0%
Liabilities				
Current Liabilities:				
Accounts Payable	$ 73,000	9.3%	$ 68,000	10.6%
Accrued Liabilities	27,000	3.4	31,000	4.8
Notes Payable	42,000	5.3	27,000	4.2
Total Current Liabilities	142,000	18.0	126,000	19.6
Long-term Liabilities	289,000	36.7	198,000	30.7
Total Liabilities	431,000	54.8	324,000	50.3
Stockholders' Equity				
Common Stock, no par	186,000	23.6	186,000	28.9
Retained Earnings	170,000	21.6	134,000	20.8
Total Stockholders' Equity	356,000	45.2	320,000	49.7
Total Liabilities and Stockholders' Equity	$ 787,000	100.0%	$ 644,000	100.0%

The vertical analysis of Smart Touch Learning's balance sheet reveals several interesting things:

- Current assets make up 33.3% of total assets in 2020 and 36.6% of total assets in 2019. This is typical for most companies with current assets representing close to 30% of total assets.
- Total liabilities are 54.8% of total assets in 2020, increasing slightly from 2019, 50.3%.
- Stockholders' equity makes up 45.2% of total assets in 2020 and 49.7% of total assets in 2019. The percentage share of total assets was nearly equally distributed between total liabilities and total equity for both years.

Common-Size Statements

Horizontal analysis and vertical analysis provide much useful data about a company. As we have seen, Smart Touch Learning's percentages depict a very successful company. But the data apply only to one business.

Common-Size Statement
A financial statement that reports only percentages (no dollar amounts).

Dollar Value Bias
The bias one sees from comparing numbers in absolute (dollars) rather than relative (percentage) terms.

To compare Smart Touch Learning to another company, we can use a common-size statement. A **common-size statement** reports only percentages—the same percentages that appear in a vertical analysis. By only reporting percentages, it removes dollar value bias when comparing one company to another company. **Dollar value bias** is the bias one sees from comparing numbers in absolute (dollars) rather than relative (percentage) terms. For us, $1 million seems like a large number. For some large companies, it is immaterial.

We could prepare common-size statements for Smart Touch Learning from year to year; however, we will start by preparing common-size income statements for Smart Touch Learning and Learning School, another fictitious company, both of which compete in the same industry. Which company earns a higher percentage of revenues as profits for its shareholders? Exhibit 15-5 gives both companies' common-size income statements for 2020 so that we can compare them on a relative, not absolute, basis.

Exhibit 15-5 | Common-Size Income Statement—Smart Touch Learning Versus Learning School

SMART TOUCH LEARNING Versus LEARNING SCHOOL
Common-Size Income Statement
Year Ended December 31, 2020

	Smart Touch Learning	Learning School
Net Sales Revenue	100.0%	100.0%
Cost of Goods Sold	59.8	36.3
Gross Profit	40.2	63.7
Operating Expenses:		
Selling Expenses	14.7	21.8
Administrative Expenses	13.8	7.3
Total Operating Expenses	28.4	29.1
Operating Income	11.8	34.6
Other Income and (Expenses):		
Interest Revenue	0.5	11.5
Interest Expense	(2.8)	(10.3)
Total Other Income and (Expenses)	(2.3)	1.2
Income Before Income Taxes	9.4	35.8
Income Tax Expense	3.8	12.3
Net Income	5.6%	23.5%

Exhibit 15-5 shows that Learning School was more profitable than Smart Touch Learning in 2020. Learning School's gross profit percentage is 63.7%, compared with Smart Touch Learning's 40.2%. This means that Learning School is earning more gross profit from every dollar of revenue than Smart Touch Learning is earning. And, most importantly, Learning School's percentage of net income to revenues is 23.5%. That means almost one-fourth of Learning School's revenues result in profits for the company's stockholders. Smart Touch

Learning's percentage of net income to revenues, on the other hand, is 5.6%, significantly lower than Learning School's. Smart Touch Learning's lower net income is directly attributable to its larger percentage of cost of goods sold to net sales revenue. Smart Touch Learning's cost of goods sold represents 59.8% of net sales revenue, whereas Learning School's cost of goods sold is only 36.3%.

Benchmarking

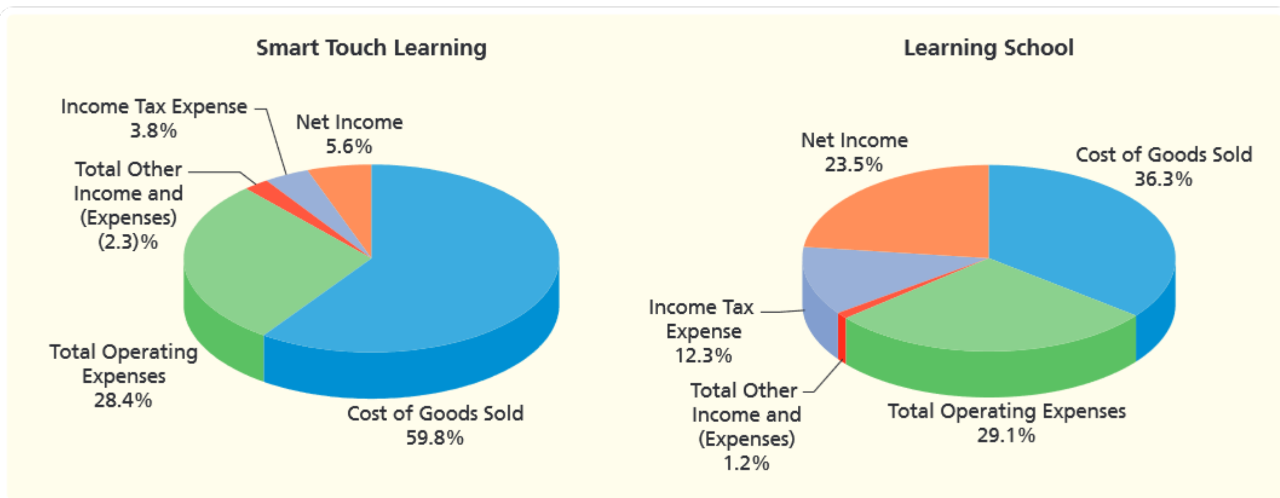
Benchmarking is the practice of comparing a company's performance with best practices from other companies. It often uses the common-size percentages in a graphical manner to highlight differences. There are two main types of benchmarks in financial statement analysis: benchmarking against a key competitor and benchmarking against the industry average.

Benchmarking
The practice of comparing a company's performance with best practices from other companies.

Benchmarking Against a Key Competitor

Exhibit 15-5 uses a key competitor, Learning School, to compare Smart Touch Learning's profitability. The two companies compete in the same industry, so Learning School serves as an ideal benchmark for Smart Touch Learning. The charts in Exhibit 15-6 highlight the profitability difference between the companies. Focus on the segments of the graphs showing cost of goods sold and net income. Learning School is clearly more profitable than Smart Touch Learning, primarily because its cost of goods sold is significantly lower.

Exhibit 15-6 | **Graphical Analysis of Common-Size Income Statement—Smart Touch Learning Versus Learning School**



Benchmarking Against the Industry Average

The industry average can also serve as a very useful benchmark for evaluating a company. An industry comparison would show how Smart Touch Learning is performing alongside the average for the e-learning industry. *Annual Statement Studies*, published by the Risk Management Association, provides common-size statements for most industries. To compare Smart Touch Learning to the industry average, we would simply insert the industry-average common-size income statement in place of Learning School in Exhibit 15-5.

As you are taking classes toward your degree, how do you know how quickly you can complete your studies? If you knew the average credit hours taken each semester was 12 credit hours, then 12 credit hours would be your benchmark. Comparing the number of classes you take to the average of 12 credit hours a semester is the same concept as benchmarking. Maybe you are taking 15 credit hours a semester. Then you'd be completing your degree faster than the average student. Maybe you take only 3 credit hours in the spring so you can work a part-time job. Then you'd be completing classes at a slower pace than average.

Try It!

6. Monroe Corp. reported the following amounts on its balance sheet at December 31, 2018 and 2017:

	2018	2017
Cash and Receivables	$ 35,000	$ 40,000
Merchandise Inventory	20,000	15,000
Property, Plant, and Equipment, Net	80,000	60,000
Total Assets	$ 135,000	$ 115,000

Prepare a vertical analysis of Monroe Corp. for 2018 and 2017.

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S15-4 and S15-5. MyAccountingLab

HOW DO WE USE RATIOS TO ANALYZE A BUSINESS?

Learning Objective 4
Compute and evaluate the standard financial ratios

Online financial databases, such as LexisNexis and the Dow Jones, provide data on thousands of companies. Suppose you want to compare some companies' recent earnings histories. You might want to compare companies' returns on stockholders' equity. You could use a computer to search the databases and give you the names of the 20 companies with the highest return on equity. You can use any ratio to search for information that is relevant to a particular decision.

Remember, however, that no single ratio tells the whole picture of any company's performance. Different ratios explain different aspects of a company. The ratios we discuss in this chapter may be classified and used for the following purposes:

- Evaluating the ability to pay current liabilities
- Evaluating the ability to sell merchandise inventory and collect receivables
- Evaluating the ability to pay long-term debt
- Evaluating profitability
- Evaluating stock as an investment

We will use the comparative income statement and balance sheet of Smart Touch Learning, shown in Exhibit 15-7, to discuss the ratios that can be used to evaluate a company. Let's begin by discussing ratios that can be used to evaluate a company's ability to pay its current liabilities.

Exhibit 15-7 | **Comparative Financial Statements**

SMART TOUCH LEARNING
Balance Sheet
December 31, 2020 and 2019

	2020	2019
Assets		
Current Assets:		
Cash and Cash Equivalents	$ 29,000	$ 32,000
Accounts Receivable, Net	114,000	85,000
Merchandise Inventory	113,000	111,000
Prepaid Expenses	6,000	8,000
Total Current Assets	262,000	236,000
Property, Plant, and Equipment, Net	507,000	399,000
Long-term Investments	18,000	9,000
Total Assets	$ 787,000	$ 644,000
Liabilities		
Current Liabilities:		
Accounts Payable	$ 73,000	$ 68,000
Accrued Liabilities	27,000	31,000
Notes Payable	42,000	27,000
Total Current Liabilities	142,000	126,000
Long-term Liabilities	289,000	198,000
Total Liabilities	431,000	324,000
Stockholders' Equity		
Common Stock, no par	186,000	186,000
Retained Earnings	170,000	134,000
Total Stockholders' Equity	356,000	320,000
Total Liabilities and Stockholders' Equity	$ 787,000	$ 644,000

SMART TOUCH LEARNING
Income Statement
Years Ended December 31, 2020 and 2019

	2020	2019
Net Sales Revenue	$ 858,000	$ 803,000
Cost of Goods Sold	513,000	509,000
Gross Profit	345,000	294,000
Operating Expenses:		
Selling Expenses	126,000	114,000
Administrative Expenses	118,000	123,000
Total Operating Expenses	244,000	237,000
Operating Income	101,000	57,000
Other Income and (Expenses):		
Interest Revenue	4,000	0
Interest Expense	(24,000)	(14,000)
Total Other Income and (Expenses)	(20,000)	(14,000)
Income Before Income Taxes	81,000	43,000
Income Tax Expense	33,000	17,000
Net Income	$ 48,000	$ 26,000

Evaluating the Ability to Pay Current Liabilities

In this section, we discuss one equation and three ratios that measure a company's ability to pay current liabilities.

Working Capital

Determining a company's working capital is a good starting place to evaluate a company's ability to pay its current liabilities. **Working capital** measures the ability to meet short-term obligations with current assets. Working capital is defined as follows:

Working capital = Current assets − Current liabilities

Working Capital
A measure of a business's ability to meet its short-term obligations with its current assets. Current assets – Current liabilities.

Smart Touch Learning's working capital at December 31, 2020 and 2019, is calculated as follows:

Working capital	= Current assets	−	Current liabilities		
2020:	$262,000	−	$142,000	=	$120,000
2019:	$236,000	−	$126,000	=	$110,000

Smart Touch Learning's working capital is positive, indicating that the company has more current assets than current liabilities, but additional information would be helpful. Three additional decision tools based on working capital are the cash ratio, acid-test ratio, and current ratio.

Cash Ratio

Cash is an important part of every business. Without an adequate supply of available cash, businesses cannot continue to operate. Businesses, therefore, monitor cash very carefully. One measure that can be used to calculate a company's liquidity is the cash ratio. The **cash ratio** helps to determine a company's ability to meet its short-term obligations and is calculated as cash plus cash equivalents divided by total current liabilities.

Cash Ratio
A measure of a company's ability to pay current liabilities from cash and cash equivalents: (Cash + Cash equivalents) / Total current liabilities.

Notice that the cash ratio includes cash and cash equivalents. As a reminder, cash equivalents are highly liquid investments that can be converted into cash in three months or less. Examples of cash equivalents are money-market accounts and investments in U.S. government securities.

The cash ratios of Smart Touch Learning, at December 31, 2020 and 2019, along with the average for the industry are as follows:

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Cash equivalents}}{\text{Total current liabilities}}$$

$$2020\text{:}\ \frac{\$29{,}000}{\$142{,}000} = 0.20$$

$$2019\text{:}\ \frac{\$32{,}000}{\$126{,}000} = 0.25$$

$$\text{Industry average} = 0.40$$

The cash ratio has decreased slightly from 2019 to 2020 due to a decrease in available cash and cash equivalents and an increase in total current liabilities. This ratio is the most conservative valuation of liquidity because it looks at only cash and cash equivalents, leaving out other current assets such as merchandise inventory and accounts receivable. Notice that for both years, the cash ratio was below 1.0. Having a cash ratio below 1.0 is a good thing. A cash ratio above 1.0 might signify that the company has an unnecessarily large amount of cash supply. This cash could be used to generate higher profits or be distributed as dividends to stockholders. However, a very low ratio doesn't send a strong message to investors and creditors that the company has the ability to repay its short-term debt.

Acid-Test (or Quick) Ratio

The **acid-test ratio** (sometimes called the *quick ratio*) tells us whether a company could pay all its current liabilities if they came due immediately. That is, could the company pass the acid test? The acid-test ratio is not as stringent as the cash ratio because it includes more assets in the calculation.

Acid-Test Ratio
The ratio of the sum of cash, cash equivalents, short-term investments, and net current receivables to total current liabilities. The ratio tells whether the entity could pay all its current liabilities if they came due immediately. (Cash including cash equivalents + Short-term investments + Net current receivables) / Total current liabilities.

To compute the acid-test ratio, we add cash and cash equivalents, short-term investments (those that may be sold in the next 12 months or the business operating cycle, whichever is longer), and net current receivables (accounts receivable and notes receivable, net of allowances) and divide this sum by total current liabilities. Merchandise inventory and prepaid expenses are *not* included in the acid-test ratio because they are the least-liquid current assets. Smart Touch Learning's acid-test ratios for 2020 and 2019 follow:

$$\text{Acid-test ratio} = \frac{\text{Cash including cash equivalents} + \text{Short-term investments} + \text{Net current receivables}}{\text{Total current liabilities}}$$

$$2020: \frac{\$29{,}000 + \$0 + \$114{,}000}{\$142{,}000} = 1.01$$

$$2019: \frac{\$32{,}000 + \$0 + \$85{,}000}{\$126{,}000} = 0.93$$

$$\text{Industry average} = 0.46$$

The company's acid-test ratio improved during 2020 and is significantly better than the industry average. The norm for the acid-test ratio ranges from 0.20 for shoe retailers to 1.20 for manufacturers of equipment, as reported by the Risk Management Association. An acid-test ratio of 0.90 to 1.00 is acceptable in most industries.

Current Ratio

The most widely used ratio is the **current ratio,** which is calculated as the total current assets divided by total current liabilities. The current ratio measures a company's ability to pay its current liabilities with its current assets. It is less stringent than the acid-test ratio and the cash ratio because it includes all current assets in the calculation.

Current Ratio
Measures the company's ability to pay current liabilities from current assets. Total current assets / Total current liabilities.

The current ratios of Smart Touch Learning, at December 31, 2020 and 2019, along with the average for the industry, are as follows:

$$\text{Current ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$$

$$2020: \frac{\$262{,}000}{\$142{,}000} = 1.85$$

$$2019: \frac{\$236{,}000}{\$126{,}000} = 1.87$$

$$\text{Industry average} = 0.60$$

A high current ratio indicates that the business has sufficient current assets to maintain normal business operations. Compare Smart Touch Learning's current ratio of 1.85 for 2020 with the industry average of 0.60.

What is an acceptable current ratio? The answer depends on the industry. The norm for companies in most industries is around 1.50, as reported by the Risk Management Association. Smart Touch Learning's current ratio of 1.85 is strong. Keep in mind that we would not want to see a current ratio that is too high, say 2.5. This would indicate that the company is too liquid and, therefore, is not using its current assets effectively. For example, the company may need to reduce merchandise inventory levels so as not to tie up available resources.

ETHICS

Should the debt be reclassified?

Victor Brannon, senior accountant for Moose Corporation, was preparing the latest financial ratios. He knew that the ratios were watched carefully by Moose Corporation's lenders due to strict loan agreements that required the corporation to maintain a minimum current ratio of 1.5. Victor knew that the past quarter's financial ratios would not meet the lenders' requirements. His boss, Cara Romano, suggested that Victor classify a note payable due in 11 months as a long-term liability. What should Victor do? What would you do?

Solution

Liabilities are classified as current if they will be settled within one year or the operating cycle, whichever is longer. The classification between current and long-term is clear. Victor should not classify the note payable as a long-term liability. It should be classified as current even though the corporation will not meet the lenders' requirements.

Evaluating the Ability to Sell Merchandise Inventory and Collect Receivables

In this section, we discuss five ratios that measure a company's ability to sell merchandise inventory and collect receivables.

Inventory Turnover

Inventory Turnover
Measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold / Average merchandise inventory.

The **inventory turnover** ratio measures the number of times a company sells its average level of merchandise inventory during a year. A high rate of turnover indicates ease in selling merchandise inventory; a low rate indicates difficulty. A value of 4 means that the company sold its average level of merchandise inventory four times—once every three months—during the year.

To compute inventory turnover, we divide cost of goods sold by the average merchandise inventory for the period. We use the cost of goods sold—not sales—because both cost of goods sold and inventory are stated *at cost*. Sales at *sales price* are not comparable with merchandise inventory *at cost*.

Smart Touch Learning's inventory turnover for 2020 is as follows:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average merchandise inventory}}$$

$$2020\text{: } \frac{\$513{,}000}{[(\$111{,}000 + \$113{,}000) / 2]} = 4.58$$

$$\text{Industry average} = 27.70$$

Cost of goods sold comes from the income statement (Exhibit 15-7). Average merchandise inventory is figured by adding the beginning merchandise inventory of $111,000 to the ending inventory of $113,000 and dividing by 2. (See the balance sheet, Exhibit 15-7. Remember that 2019's ending balances become 2020's beginning balances.)

Inventory turnover varies widely with the nature of the business. For example, most manufacturers of farm machinery have an inventory turnover close to three times a year. In contrast, companies that remove natural gas from the ground hold their merchandise inventory for a very short period of time and have an average turnover of 30. Smart Touch Learning's turnover of 4.58 times a year means, on average, the company has enough inventory to handle sales for almost 80 days (365 / 4.58 times). The inventory turnover is very low for this industry, which has an average turnover of 27.70 times per year. This ratio has identified an area in which Smart Touch Learning needs to improve.

Days' Sales in Inventory

Days' Sales in Inventory
Measures the average number of days that inventory is held by a company. 365 days / Inventory turnover.

Another key measure is the **days' sales in inventory** ratio. This measures the average number of days merchandise inventory is held by the company. Smart Touch Learning's days' sales in inventory for 2020 is as follows:

$$\text{Days' sales in inventory} = \frac{365 \text{ days}}{\text{Inventory turnover}}$$

$$2020\text{: } \frac{365 \text{ days}}{4.58} = 79.7 \text{ days}$$

$$\text{Industry average} = 13 \text{ days}$$

Days' sales in inventory varies widely, depending on the business. Smart Touch Learning's days' sales in inventory of 79.7 days is too high for its industry, which has an average days' sales in inventory ratio of only 13 days. This ratio has identified an area in

which Smart Touch Learning needs to improve. Smart Touch Learning should focus on reducing average merchandise inventory held. By decreasing average merchandise inventory, the company can increase inventory turnover and lower the average days' sales in merchandise inventory. Smart Touch Learning will also be able to reduce its merchandise inventory storage and insurance costs as well as reduce the risk of holding obsolete merchandise inventory.

Gross Profit Percentage

Gross profit (sometimes called *gross margin*) is net sales revenue minus the cost of goods sold. Merchandisers strive to increase the **gross profit percentage** (also called the *gross margin percentage*). This ratio measures the profitability of each net sales dollar above the cost of goods sold and is computed as gross profit divided by net sales revenue.

Gross Profit Percentage
Measures the profitability of each sales dollar above the cost of goods sold. Gross profit / Net sales revenue.

The gross profit percentage is one of the most carefully watched measures of profitability. It reflects a business's ability to earn a profit on the merchandise inventory. The gross profit earned on merchandise inventory must be high enough to cover the remaining operating expenses and to earn net income. A small increase in the gross profit percentage from last year to this year may signal an important rise in income. Conversely, a small decrease from last year to this year may signal trouble.

Smart Touch Learning's gross profit percentage for 2020 is as follows:

$$\text{Gross profit percentage} = \frac{\text{Gross profit}}{\text{Net sales revenue}}$$

$$2020\text{: } \frac{\$345{,}000}{\$858{,}000} = 0.402 = 40.2\%$$

$$\text{Industry average} = 43\%$$

Gross profit percentage varies widely, depending on the business. Smart Touch Learning's gross profit percentage is 40.2%, which is slightly lower than the industry average of 43%. This ratio has identified an area in which Smart Touch Learning needs to improve. To increase gross profit percentage, Smart Touch Learning needs to decrease the cost of the merchandise inventory and/or increase revenue (sales price). Additionally, addressing Smart Touch Learning's inventory turnover issues will probably help Smart Touch Learning to increase its gross profit percentage.

Accounts Receivable Turnover Ratio

The **accounts receivable turnover ratio** measures the number of times the company collects the average receivables balance in a year. The higher the ratio, the faster the cash collections. However, a receivable turnover that is too high may indicate that credit is too tight, causing the loss of sales to good customers. To compute accounts receivable turnover, we divide net credit sales (assuming all Smart Touch Learning's sales from Exhibit 15-7 are on account) by average net accounts receivable.

Accounts Receivable Turnover Ratio
A ratio that measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable.

Smart Touch Learning's accounts receivable turnover ratio for 2020 is computed as follows:

$$\text{Accounts receivable turnover ratio} = \frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$$

$$2020\text{: } \frac{\$858{,}000}{[(\$85{,}000 + \$114{,}000) / 2]} = 8.6$$

$$\text{Industry average} = 29.1$$

Net credit sales, assumed to equal net sales, comes from the income statement (Exhibit 15-7). Average net accounts receivable is figured by adding the beginning Accounts Receivable of $85,000 to the ending Accounts Receivable of $114,000 and dividing by 2. (See the balance sheet, Exhibit 15-7.)

Smart Touch Learning's accounts receivable turnover ratio of 8.6 times per year is much slower than the industry average of 29.1. Why the difference? Smart Touch Learning is a fairly new business that sells to established people who pay their accounts over time. Further, this turnover coincides with the lower-than-average inventory turnover. So, Smart Touch Learning may achieve a higher accounts receivable turnover by increasing its inventory turnover ratio.

Days' Sales in Receivables

Days' Sales in Receivables
The ratio of average net accounts receivable to one day's sales. The ratio tells how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio.

Days' sales in receivables, also called the *collection period*, indicates how many days it takes to collect the average level of receivables and is computed as 365 days divided by the accounts receivable turnover ratio. The number of days in average accounts receivable should be close to the number of days customers are allowed to make payment. The shorter the collection period, the more quickly the organization can use its cash. The longer the collection period, the less cash is available for operations.

To compute this ratio for Smart Touch Learning for 2020, we divide 365 days by the accounts receivable turnover ratio we previously calculated:

$$\text{Days' Sales in Receivables} = \frac{365 \text{ days}}{\text{Accounts receivable turnover ratio}}$$

$$2020: \frac{365 \text{ days}}{8.6} = 42.4 \text{ days}$$

$$\text{Industry average} = 25 \text{ days}$$

Smart Touch Learning's ratio tells us that 42.4 average days' sales remain in Accounts Receivable and need to be collected. The company's days' sales in receivables ratio is much higher (worse) than the industry average of 25 days. We need to determine the company's credit terms to assess this ratio. Smart Touch Learning might give its customers a longer time to pay, such as 45 days versus 30 days. Alternatively, Smart Touch Learning's credit department may need to review the criteria it uses to evaluate individual customers' credit. Without the customers' good paying habits, the company's cash flow would suffer.

Evaluating the Ability to Pay Long-term Debt

The ratios discussed so far yield insight into current assets and current liabilities. They help us measure ability to sell merchandise inventory, collect receivables, and pay current liabilities. Most businesses also have long-term debt. Three key indicators of a business's ability to pay long-term liabilities are the debt ratio, the debt to equity ratio, and the times-interest-earned ratio.

Debt Ratio

Debt Ratio
Shows the proportion of assets financed with debt. Total liabilities / Total assets.

The relationship between total liabilities and total assets—called the **debt ratio**—shows the proportion of assets financed with debt and is calculated by dividing total liabilities by total assets. If the debt ratio is 100%, then all the assets are financed with debt. A debt ratio of 50% means that half the assets are financed with debt, and the other half are financed by the owners of the business. The higher the debt ratio, the higher the company's financial risk. The debt ratio can be used to evaluate a business's ability to pay its debts.

The debt ratios for Smart Touch Learning at the end of 2020 and 2019 follow:

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

$$2020\text{: } \frac{\$431{,}000}{\$787{,}000} = 0.548 = 54.8\%$$

$$2019\text{: } \frac{\$324{,}000}{\$644{,}000} = 0.503 = 50.3\%$$

$$\text{Industry average} = 69\%$$

Both total liabilities and total asset amounts are from the balance sheet, presented in Exhibit 15-7. Smart Touch Learning's debt ratio in 2020 of 54.8% is not very high. The Risk Management Association reports that the average debt ratio for most companies ranges from 57% to 67%, with relatively little variation from company to company. Smart Touch Learning's debt ratio indicates a fairly low-risk position compared with the industry average debt ratio of 69%.

Debt to Equity Ratio

The relationship between total liabilities and total equity—called the **debt to equity ratio**—shows the proportion of total liabilities relative to total equity. Thus, this ratio measures financial leverage. If the debt to equity ratio is greater than 1, then the company is financing more assets with debt than with equity. If the ratio is less than 1, then the company is financing more assets with equity than with debt. The higher the debt to equity ratio, the greater the company's financial risk.

Debt to Equity Ratio
A ratio that measures the proportion of total liabilities relative to total equity. Total liabilities / Total equity.

The debt to equity ratios for Smart Touch Learning at the end of 2020 and 2019 follow:

$$\text{Debt to equity ratio} = \frac{\text{Total liabilities}}{\text{Total equity}}$$

$$2020\text{: } \frac{\$431{,}000}{\$356{,}000} = 1.21$$

$$2019\text{: } \frac{\$324{,}000}{\$320{,}000} = 1.01$$

$$\text{Industry average} = 2.23$$

Smart Touch Learning's debt to equity ratio in 2020 of 1.21 is not very high. Smart Touch Learning's debt to equity ratio indicates a fairly low-risk position compared with the industry average debt to equity ratio of 2.23.

Times-Interest-Earned Ratio

The debt ratio and debt to equity ratio say nothing about the ability to pay interest expense. Analysts and investors use the **times-interest-earned ratio** to evaluate a business's ability to pay interest expense. This ratio measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense. This ratio is also called the *interest-coverage ratio*. A high times-interest-earned ratio indicates a business's ease in paying interest expense; a low ratio suggests difficulty. The times-interest-earned ratio is calculated as EBIT (Net income + Income tax expense + Interest expense) divided by interest expense.

Times-Interest-Earned Ratio
Evaluates a business's ability to pay interest expense. (Net income + Income tax expense + Interest expense) / Interest expense.

Calculation of Smart Touch Learning's times-interest-earned ratio follows:

$$\text{Times-interest-earned ratio} = \frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$$

$$2020: \frac{\$48{,}000 + \$33{,}000 + \$24{,}000}{\$24{,}000} = 4.38$$

$$2019: \frac{\$26{,}000 + \$17{,}000 + \$14{,}000}{\$14{,}000} = 4.07$$

$$\text{Industry average} = 7.80$$

The company's times-interest-earned ratios of 4.38 for 2020 and 4.07 for 2019 are significantly lower than the industry average of 7.80 times, but it is slightly better than the ratio for the average U.S. business. The norm for U.S. business, as reported by the Risk Management Association, falls in the range of 2.0 to 3.0. When you consider Smart Touch Learning's debt ratio and its times-interest-earned ratio, Smart Touch Learning appears to have little difficulty paying its liabilities.

Evaluating Profitability

The fundamental goal of business is to earn a profit. Ratios that measure profitability often are reported in the business press. Let's examine five profitability measures.

Profit Margin Ratio

Profit Margin Ratio
A profitability measure that shows how much net income is earned on every dollar of net sales. Net income / Net sales revenue.

The **profit margin ratio** shows the percentage of each net sales dollar earned as net income. In other words, the profit margin ratio shows how much net income a business earns on every $1.00 of sales. This ratio focuses on the profitability of a business and is calculated as net income divided by net sales revenue.

Smart Touch Learning's profit margin ratio follows:

$$\text{Profit margin ratio} = \frac{\text{Net income}}{\text{Net sales revenue}}$$

$$2020: \frac{\$\ 48{,}000}{\$858{,}000} = 0.056 = 5.6\%$$

$$2019: \frac{\$\ 26{,}000}{\$803{,}000} = 0.032 = 3.2\%$$

$$\text{Industry average} = 1.7\%$$

Both net income and net sales revenue amounts are from the income statement presented in Exhibit 15-7. Companies strive for a high profit margin. The higher the profit margin, the more sales dollars end up as profit. The increase in Smart Touch Learning's profit margin ratio from 2019 to 2020 is significant and identifies the company as more successful than the average e-learning providers, whose profit margin ratio is 1.7%.

Rate of Return on Total Assets

Rate of Return on Total Assets
A ratio that measures the success a company has in using its assets to earn income. (Net income + Interest expense) / Average total assets.

The **rate of return on total assets** measures a company's success in using its assets to earn a profit. There are two ways that a company can finance its assets:

- Debt—A company can borrow cash from creditors to purchase assets. Creditors earn interest on the money that is loaned.
- Equity—A company receives cash or other assets from stockholders. Stockholders invest in the company and hope to receive a return on their investment.

Rate of return on total assets is calculated by adding interest expense to net income and dividing by average total assets. Interest expense is added back to net income to determine the real return on the assets regardless of the corporation's financing choices (debt or equity).

Computation of the rate of return on total assets ratio for Smart Touch Learning follows:

$$\text{Rate of return on total assets} = \frac{\text{Net income} + \text{Interest expense}}{\text{Average total assets}}$$

$$2020\text{:}\ \frac{\$48{,}000 + \$24{,}000}{[(\$644{,}000 + \$787{,}000) / 2]} = 0.101 = 10.1\%$$

$$\text{Industry average} = 6.0\%$$

Net income and interest expense come from the income statement (Exhibit 15-7). Average total assets is figured by adding the beginning total assets of $644,000 to the ending total assets of $787,000 and dividing by 2. (See the balance sheet, Exhibit 15-7.) Smart Touch Learning's rate of return on total assets ratio of 10.1% is much better than the industry average of 6.0%.

Asset Turnover Ratio

The **asset turnover ratio** measures the amount of net sales revenue generated for each average dollar of total assets invested. This ratio measures how well a company is using its assets to generate sales revenues. To compute this ratio, we divide net sales revenue by average total assets.

Asset Turnover Ratio
Measures how efficiently a business uses its average total assets to generate sales. Net sales revenue / Average total assets.

Smart Touch Learning's 2020 asset turnover ratio is as follows:

$$\text{Asset turnover ratio} = \frac{\text{Net sales revenue}}{\text{Average total assets}}$$

$$2020\text{:}\ \frac{\$858{,}000}{[(\$644{,}000 + \$787{,}000) / 2]} = 1.20 \text{ times}$$

$$\text{Industry average} = 3.52 \text{ times}$$

Smart Touch Learning's asset turnover ratio of 1.20 is much lower than the industry average of 3.52 times, indicating that Smart Touch Learning is generating less net sales revenue for each average dollar of total assets invested. Recall that Smart Touch Learning's gross profit percentage was lower than the industry's also. Normally, companies with high gross profit percentages will have low asset turnover. Companies with low gross profit percentages will have high asset turnover ratios. This is another area in which Smart Touch Learning's management must consider options to increase sales and decrease its average total assets to improve this ratio.

Rate of Return on Common Stockholders' Equity

A popular measure of profitability is **rate of return on common stockholders' equity**, often shortened to *return on equity*. This ratio shows the relationship between net income available to common stockholders and their average common equity invested in the company. The rate of return on common stockholders' equity shows how much income is earned for each $1 invested by the common shareholders.

Rate of Return on Common Stockholders' Equity
Shows the relationship between net income available to common stockholders and their average common equity invested in the company. (Net income − Preferred dividends) / Average common stockholders' equity.

To compute this ratio, we first subtract preferred dividends from net income to get net income available to the common stockholders. (Smart Touch Learning does not have any preferred stock issued, so preferred dividends are zero.) Then we divide net income available to common stockholders by average common stockholders' equity during the

year. Common equity is total stockholders' equity minus preferred equity. Average common stockholders' equity is the average of the beginning and ending common stockholders' equity balances.

The 2020 rate of return on common stockholders' equity for Smart Touch Learning follows:

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$2020\text{: } \frac{\$48{,}000 - \$0}{[(\$320{,}000 + \$356{,}000) / 2]} = 0.142 = 14.2\%$$

$$\text{Industry average} = 10.5\%$$

Smart Touch Learning's rate of return on common stockholders' equity of 14.2% is higher than its rate of return on total assets of 10.1%. This difference results from borrowing at one rate—say, 8%—and investing the money to earn a higher rate, such as the firm's 14.2% return on equity. This practice is called **trading on the equity**, or using *leverage*. It is directly related to the debt ratio. The higher the debt ratio, the higher the leverage. Companies that finance operations with debt are said to *leverage* their positions.

Trading on the Equity
Earning more income on borrowed money than the related interest expense, thereby increasing the earnings for the owners of the business.

During good times, leverage increases profitability. But leverage can have a negative impact on profitability as well. Therefore, leverage is a double-edged sword, increasing profits during good times but compounding losses during bad times. Compare Smart Touch Learning's rate of return on common stockholders' equity with the industry average of 10.5%. Once again, Smart Touch Learning is performing much better than the average company in its industry. A rate of return on common stockholders' equity of 15% to 20% year after year is considered good in most industries. At 14.2%, Smart Touch Learning is doing well.

Earnings per Share (EPS)

Earnings per Share (EPS)
Amount of a company's net income (loss) for each share of its outstanding common stock. (Net income – Preferred dividends) / Weighted average number of common shares outstanding.

Earnings per share (EPS) is perhaps the most widely quoted of all financial statistics. EPS is the only ratio that must appear on the financial statements. Earnings per share reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted average number of common shares outstanding. Preferred dividends are subtracted from net income because the preferred stockholders have the first claim to dividends. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding, calculated as the beginning balance plus ending balance divided by two.

FASB requires that earnings per share appear on the income statement. Corporations report a separate EPS figure for each element of income, which was shown in more detail in the stockholders' equity chapter.

Smart Touch Learning's EPS for 2020 and 2019 follow. (Note that Smart Touch Learning had 10,000 shares of common stock outstanding throughout both years.)

$$\text{Earnings per share} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

$$2020\text{: } \frac{\$48{,}000 - \$0}{10{,}000 \text{ shares}} = \$4.80 \text{ per share}$$

$$2019\text{: } \frac{\$26{,}000 - \$0}{10{,}000 \text{ shares}} = \$2.60 \text{ per share}$$

$$\text{Industry average} = \$9.76 \text{ per share}$$

Smart Touch Learning's EPS increased significantly in 2020 (by almost 85%). Its stockholders should not expect this big a boost in EPS every year. Most companies strive to increase EPS by 10% to 15% annually, and leading companies do so. But even the most successful companies have an occasional bad year. EPS for the industry at \$9.76 is a little more than twice Smart Touch Learning's 2020 EPS. Therefore, Smart Touch Learning needs to work on continuing to increase EPS by increasing its net income so that it is more competitive with other companies in its industry.

Evaluating Stock as an Investment

Investors purchase stock to earn a return on their investment. This return consists of two parts: (1) gains (or losses) from selling the stock at a price above (or below) purchase price and (2) dividends. The ratios we examine in this section help analysts evaluate stock investments.

Price/Earnings Ratio

The **price/earnings ratio** is the ratio of the market price of a share of common stock to the company's earnings per share. The price/earnings ratio shows the market price of \$1 of earnings. This ratio, abbreviated P/E, appears in many print or online stock listings and measures the value that the stock market places on a company's earnings.

Price/Earnings Ratio
The ratio of the market price of a share of common stock to the company's earnings per share. Measures the value that the stock market places on \$1 of a company's earnings. Market price per share of common stock / Earnings per share.

Calculations for the P/E ratios of Smart Touch Learning follow. The market prices of common stock for real companies can be obtained from a financial Web site, a stockbroker, or the company's Web site. The market price for Smart Touch Learning's common stock was \$60 at the end of 2020 and \$35 at the end of 2019. The earnings per share values were calculated immediately before the P/E ratio.

$$\text{Price/earnings ratio} = \frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$$

$$2020\text{:}\ \frac{\$60 \text{ per share}}{\$4.80 \text{ per share}} = 12.50$$

$$2019\text{:}\ \frac{\$35 \text{ per share}}{\$2.60 \text{ per share}} = 13.46$$

$$\text{Industry average} = 17.79$$

Smart Touch Learning's P/E ratio for 2020 of 12.50 means that the company's stock is selling at 12.5 times one year's earnings per share. Smart Touch Learning would like to see this ratio increase in future years in order to be more in line with the industry average P/E of 17.79.

Dividend Yield

Dividend Yield
Ratio of annual dividends per share of stock to the stock's market price per share. Measures the percentage of a stock's market value that is returned annually as dividends to stockholders. Annual dividend per share / Market price per share.

Dividend yield is the ratio of annual dividends per share to the stock's market price per share. This ratio measures the percentage of a stock's market value that is returned annually as dividends to shareholders. *Preferred* stockholders, who invest primarily to receive dividends, pay special attention to dividend yield.

Assume Smart Touch Learning paid annual cash dividends of $1.20 per share of common stock in 2020 and $1.00 in 2019. As noted previously, market prices of the company's common stock were $60 in 2020 and $35 in 2019. The firm's dividend yields on common stock follow:

$$\text{Dividend yield} = \frac{\text{Annual dividend per share}}{\text{Market price per share}}$$

$$2020\text{:}\ \frac{\$1.20 \text{ per share}}{\$60 \text{ per share}} = 0.020 = 2.0\%$$

$$2019\text{:}\ \frac{\$1.00 \text{ per share}}{\$35 \text{ per share}} = 0.029 = 2.9\%$$

$$\text{Industry average} = 3.6\%$$

In this calculation, we are determining the dividend yield for common stock. Dividend yield can also be calculated for preferred stock.

An investor who buys Smart Touch Learning's common stock for $60 can expect to receive 2.0% of the investment annually in the form of cash dividends. The industry, however, is paying out 3.6% annually. An investor might be willing to accept lower dividends (cash now) if the stock's market price is growing (cash later when the stock is sold).

Dividend Payout

Dividend Payout
The ratio of dividends declared per common share relative to the earnings per share of the company. Annual dividend per share / Earnings per share.

Dividend payout is the ratio of annual dividends declared per common share relative to the earnings per share of the company. This ratio measures the percentage of earnings paid annually to common shareholders as cash dividends.

Recall that Smart Touch Learning paid annual cash dividends of $1.20 per share of common stock in 2020 and $1.00 in 2019. Earnings per share were calculated as $4.80 per share for 2020 and $2.60 for 2019. So, Smart Touch Learning's dividend payout yields are as follows:

$$\text{Dividend payout} = \frac{\text{Annual dividend per share}}{\text{Earnings per share}}$$

$$2020\text{:}\ \frac{\$1.20 \text{ per share}}{\$4.80 \text{ per share}} = 0.25 = 25\%$$

$$2019\text{:}\ \frac{\$1.00 \text{ per share}}{\$2.60 \text{ per share}} = 0.38 = 38\%$$

$$\text{Industry average} = 63\%$$

Smart Touch Learning's dividend payout ratios of 25% in 2020 and 38% in 2019 are less than the industry average of 63%. Smart Touch Learning, being a fairly new company, might be retaining more of its earnings for growth and expansion. An investor who buys Smart Touch Learning's common stock may predict annual cash dividends to be about 25% of earnings, based on the 2020 dividend payout ratio. This investor would want to see higher market prices and higher asset turnover for Smart Touch Learning in the future for Smart Touch Learning to stay competitive.

Red Flags in Financial Statement Analyses

Analysts look for *red flags* in financial statements that may signal financial trouble. Recent accounting scandals highlight the importance of these red flags. The following conditions may reveal that the company is too risky:

- **Movement of sales, merchandise inventory, and receivables.** Sales, merchandise inventory, and receivables generally move together. Increased sales lead to higher receivables and may require more merchandise inventory (or higher inventory turnover) to meet demand. Unexpected or inconsistent movements among sales, merchandise inventory, and receivables make the financial statements look suspect.
- **Earnings problems.** Has net income decreased significantly for several years in a row? Did the company report net income in previous years but now is reporting a net loss? Most companies cannot survive losses year after year.
- **Decreased cash flow.** Cash flow validates net income. Is net cash flow from operating activities consistently lower than net income? If so, the company is in trouble. Are the sales of plant assets a major source of cash? If so, the company may face a cash shortage.
- **Too much debt.** How does the company's debt ratio compare to that of major competitors? If the debt ratio is too high, the company may be unable to pay its debts.
- **Inability to collect receivables.** Are days' sales in receivables growing faster than for competitors? If so, a cash shortage may be looming.
- **Buildup of merchandise inventories.** Is inventory turnover too slow? If so, the company may be unable to sell goods, or it may be overstating merchandise inventory.

Do any of these red flags apply to Smart Touch Learning from the analyses we did in the chapter? Although the financial statements depict a strong and growing company, the analysis pointed out several areas of weakness for Smart Touch Learning that include low inventory turnover, low accounts receivable turnover, low gross profit margin, low times interest earned, low asset turnover, and low earnings per share. Smart Touch Learning should continue to carefully monitor its financial statements as it continues to grow. Exhibit 15-8 summarizes the financial ratios that you have learned in this chapter.

Exhibit 15-8 | Using Ratios in Financial Statement Analysis

Ratio	Computation	Information Provided
Evaluating the ability to pay current liabilities:		
Working capital	Current assets − Current liabilities	A business's ability to meet its short-term obligations with its current assets.
Cash ratio	$\frac{\text{Cash + Cash equivalents}}{\text{Total current liabilities}}$	The company's ability to pay current liabilities from cash and cash equivalents.
Acid-test ratio	$\frac{\text{Cash including cash equivalents + Short-term investments + Net current receivables}}{\text{Total current liabilities}}$	The company's ability to pay all its current liabilities if they came due immediately.
Current ratio	$\frac{\text{Total current assets}}{\text{Total current liabilities}}$	The company's ability to pay current liabilities from current assets.

(*Continued in next page*)

Exhibit 15-8 | **Using Ratios in Financial Statement Analysis (Continued)**

Ratio	Computation	Information Provided
Evaluating the ability to sell merchandise inventory and collect receivables:		
Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average merchandise inventory}}$	The number of times a company sells its average level of merchandise inventory during a period.
Days' sales in inventory	$\frac{\text{365 days}}{\text{Inventory turnover}}$	The average number of days that inventory is held by a company.
Gross profit percentage	$\frac{\text{Gross profit}}{\text{Net sales revenue}}$	The profitability of each sales dollar above the cost of goods sold.
Accounts receivable turnover ratio	$\frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$	The number of times the company collects the average receivables balance in a year.
Days' sales in receivables	$\frac{\text{365 days}}{\text{Accounts receivable turnover ratio}}$	The number of days it takes to collect the average level of receivables.
Evaluating the ability to pay long-term debt:		
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$	The proportion of assets financed with debt.
Debt to equity ratio	$\frac{\text{Total liabilities}}{\text{Total equity}}$	The proportion of total liabilities relative to total equity.
Times-interest-earned ratio	$\frac{\text{Net income + Income tax expense + Interest expense}}{\text{Interest expense}}$	A business's ability to pay interest expense.
Evaluating profitability:		
Profit margin ratio	$\frac{\text{Net income}}{\text{Net sales revenue}}$	How much net income is earned on every dollar of net sales revenue.
Rate of return on total assets	$\frac{\text{Net income + Interest expense}}{\text{Average total assets}}$	The success a company has in using its assets to earn income.
Asset turnover ratio	$\frac{\text{Net sales revenue}}{\text{Average total assets}}$	How efficiently a business uses its average total assets to generate sales.
Rate of return on common stockholders' equity	$\frac{\text{Net income − Preferred dividends}}{\text{Average common stockholders' equity}}$	The relationship between net income available to common stockholders and their average common equity invested in the company.
Earnings per share	$\frac{\text{Net income − Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$	Amount of a company's net income (loss) for each share of its outstanding common stock.
Evaluating stock as an investment:		
Price/earnings ratio	$\frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$	The value the stock market places on $1 of a company's earnings.
Dividend yield	$\frac{\text{Annual dividend per share}}{\text{Market price per share}}$	The percentage of a stock's market value that is returned annually as dividends to stockholders.
Dividend payout	$\frac{\text{Annual dividend per share}}{\text{Earnings per share}}$	Ratio of dividends declared per common share relative to the earnings per share of the company.

Try It!

The financial statements of Ion Corporation include the following items:

	Current Year	Preceding Year
Balance Sheet:		
Cash	$ 6,000	$ 8,000
Short-term Investments	4,400	10,700
Net Accounts Receivable	21,600	29,200
Merchandise Inventory	30,800	27,600
Prepaid Expenses	6,000	3,600
Total Current Assets	68,800	79,100
Total Current Liabilities	53,200	37,200
Income Statement:		
Net Sales Revenue	$ 184,800	
Cost of Goods Sold	126,000	

Compute the following ratios for the current year:

7. Current ratio
8. Acid-test ratio
9. Inventory turnover
10. Gross profit percentage

Check your answers online in MyAccountingLab or at http://www.pearsonhighered.com/Horngren.

For more practice, see Short Exercises S15-6 through S15-12. MyAccountingLab

REVIEW

> Things You Should Know

1. How are financial statements used to analyze a business?

- There are three main ways to analyze financial statements:
  - Horizontal analysis
  - Vertical analysis
  - Ratio analysis
- Annual reports provide information about a company's financial condition and include the following:
  - Business overview
  - Management's discussion and analysis of financial condition and results of operations (MD&A)

- Report of independent registered public accounting firm
- Financial statements
- Notes to the financial statements

2. How do we use horizontal analysis to analyze a business?

- Horizontal analysis is the study of percentage changes in line items from comparative financial statements. It compares one year to the next. (Dollar amount of change / Base period amount) × 100.
- Trend analysis is a form of horizontal analysis in which percentages are computed by selecting a base year as 100% and expressing the amounts for following periods as a percentage of the base period amount. (Any period amount / Base period amount) × 100.

3. How do we use vertical analysis to analyze a business?

- Vertical analysis reveals the relationship of each statement item to its base amount, which is the 100% figure. (Specific item / Base amount) × 100.
  - For the income statement, net sales revenue is the base.
  - For the balance sheet, total assets is the base.
- Common-size statements are financial statements that report only percentages—the same percentages that appear in vertical analysis.
- Benchmarking is the practice of comparing a company's performance with its prior performance or with best practices from other companies.

4. How do we use ratios to analyze a business?

- Ratios can be used to evaluate a company's:
  - ability to pay current liabilities
  - ability to sell merchandise inventory and collect receivables
  - ability to pay long-term debt
  - profitability
  - stock as an investment
- Exhibit 15-8 summarizes common ratios that can be used to analyze a business.

Chapter 15
Financial Statement Analysis

Review Questions

1. The three main ways to analyze financial statements are horizontal analysis, vertical analysis, and ratio analysis.

2. An annual report (10-K) is a report required by the Securities and Exchange Commission that provides information about a company's financial condition. The annual report includes the following:
- An overview of the business
- Management's discussion and analysis of financial conditions and operations
- The report of an independent registered public accounting firm
- Financial statements
- Notes to financial statements

3. The horizontal analysis is the study of percentage changes in line items from comparative financial statements. The percentage change is calculated using this formula: (Dollar amount of change / Base period amount) × 100.

4. The trend analysis is a form of horizontal analysis in which percentages are computed for line items by selecting a base period as 100% and expressing amounts for following periods as a percentage of the base period amount. (Any period amount / Base period amount) × 100.

5. The vertical analysis of a financial statement shows the relationship of each line item to its base amount, which is the 100% figure. Every other item on the statement is then reported as a percentage of the base. For the income statement, net sales revenue is the base. For the balance sheet, total assets is the base.

6. A common-size statement reports only percentages—the same percentages that appear in a vertical analysis. By only reporting percentages, it removes dollar value bias when comparing one company to another company.

7. Benchmarking is the practice of comparing a company's performance with its prior performance or with best practices from other companies. The two main types of benchmarking in financial statement analysis are: benchmarking against a key competitor and benchmarking against the industry average.

8. The financial measures that are used to evaluate the ability of a company to pay its current liabilities are:
- Working capital: Current assets – Current liabilities
- Cash ratio: (Cash + Cash equivalents) / Total current liabilities
- Acid-Test (or Quick) ratio: (Cash + Short-term investments + Net current receivables) / Total current liabilities
- Current ratio: Current assets / Total current liabilities

9. The ratios that are used to evaluate a company's ability to sell merchandise inventory and collect receivables are:

- Inventory turnover—measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold/ Average merchandise inventory.
- Days' sales in inventory measures the average number of days merchandise inventory is held by the company: 365 days / Inventory turnover
- Gross profit percentage measures the profitability of each net sales dollar above the cost of goods sold and is computed as: Gross profit / Net sales revenue.
- Accounts receivable turnover measures the number of times the company collects the average receivables balance in a year: Net credit sales / Average net accounts receivable.
- Days' sales in receivables is also called the collection period. This ratio indicates how many days it takes to collect the average level of receivables: 365 days / Accounts receivable turnover.

10. The ratios that can be used to evaluate a company's ability to pay long-term debt are:

- Debt ratio—Shows the proportion of assets financed by debt: Total liabilities / Total assets.
- Debt to Equity ratio—Shows the proportion of total debt to equity: Total liabilities / Total equity.
- Times-Interest-Earned ratio—Evaluates the business's ability to pay interest expense. It is calculated as: EBIT (Net income + Income tax expense + Interest expense) / interest expense.

11. The ratios that can be used to evaluate a company's profitability are:

- Profit margin ratio—Shows how much net income is earned on every dollar of sales: Net income / Net sales revenue.
- Rate of return on total assets—Measures the success a company has in using its assets to earn income: (Net income + Interest expense) / Average total assets.
- Asset turnover ratio—Measures how efficiently a business uses its average total assets to generate sales: Net sales revenue / Average total assets.
- Rate of return on common stockholder's equity—Shows the relationship between net income available to common stockholders and their average common equity invested in the company: (Net income – Preferred dividends) / Average common stockholder's equity.
- Earnings per share—Measures the amount of a company's net income (loss) for each share of its outstanding common stock: (Net income – Preferred dividends) / Weighted average number of common shares outstanding.

12. The ratios that can be used to evaluate a company's stock as an investment are:

- Price / earnings ratio—The market price of a share of common stock in relation to the company's earnings per share. It measures the value that the stock market places on $1 of a company's earnings: Market price per share of common stock / Earnings per share.
- Dividend yield—The ratio of annual dividends per share of stock to the stock's market price per share. It measures the percentage of a stock's market value that is returned annually as dividends to stockholders: Annual dividend per share / Market price per share.
- Dividend payout—The ratio of dividends declared per common share relative to the earnings per share of the company: Annual dividend per share / Earnings per share.

13. Some of the common red flags in financial statement analysis are:

- Unexpected or inconsistent movements among sales, merchandise inventory, and receivables
- Earnings problems
- Decreased cash flow
- Too much debt
- Inability to collect receivables
- Buildup of merchandise inventory

Short Exercises

S15-1

Caleb should complete a review of the company's performance across several periods of time. The horizontal analysis, vertical analysis, and standard financial ratios should be completed for the company. They should be compared from year to year with a competing company and with the same industry as a whole. He should also review the auditor's opinion, management's discussion and analysis of financial conditions and operations, and notes to financial statements in the annual report.

S15-2

				Increase (Decrease)			
	(*Amounts in millions*)			2019		2018	
	2019	2018	2017	Amount	Percent	Amount	Percent
Revenues	$ 9,890	$ 9,690	$ 9,135	$200	2.1%	$555	6.1%
Cost of goods sold	6,250	6,000	5,890				
Gross profit	$ 3,640	$ 3,690	$ 3,245	$ (50)	(1.4)%	$ 445	13.7%

S15-3
Requirement 1

	2019	2018	2017	2016
Revenue	$ 9,610	$ 9,355	$ 9,050	$ 8,950
Trend percentages	107%	105%	101%	100%
Net Income	$ 7,290	$ 6,790	$ 5,020	$ 4,300
Trend percentages	170%	158%	117%	100%

Requirement 2

Net income increased faster than revenue during 2017 – 2019.

S15-4

	2018		2017	
	Amount	Percent	Amount	Percent
Cash and Receivables	$ 80,640	28.8%	$ 80,575	29.3%
Merchandise Inventory	56,840	20.3	54,450	19.8
Property, Plant and Equipment, Net	142,520	50.9	139,975	50.9
Total Assets	$ 280,000	100.0%	$ 275,000	100.0%

S15-5
Requirement 1

	Connor	Alto
Net Sales Revenue	100.0%	100.0%
Cost of Goods Sold	60.9	71.5
Other Expenses	33.4	23.5
Net Income	5.7%	5.0%

Requirement 2

Alto earns more net income.

Requirement 3

Connor has a higher net income as a percentage of net sales revenue.

S15-6
Requirement 1

$$\text{Current ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$$

2018: $\frac{\$52,800}{\$28,000} = 1.89$

2017: $\frac{\$25,200}{\$13,200} = 1.91$

Requirement 2

Accel's Companies' current ratio deteriorated from 2017 to 2018.

S15-7
Requirement 1

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average merchandise inventory}}$$

$$2018: \quad \frac{\$28{,}400}{[(\$6{,}900 + \$8{,}600) / 2]}$$

$$\frac{\$28{,}400}{\$7{,}750} = 3.66$$

$$\text{Days' sales in inventory} = \frac{365 \text{ days}}{\text{Inventory turnover}}$$

$$2018: \quad \frac{365 \text{ days}}{3.66} = 100 \text{ days}$$

$$\text{Gross profit percentage} = \frac{\text{Gross profit}}{\text{Net sales revenue}}$$

$$2018: \quad \frac{(\$40{,}600 - \$28{,}400)}{\$40{,}600}$$

$$\frac{\$12{,}200}{\$40{,}600} = 0.300 = 30.0\%$$

S15-7, cont.
Requirement 2

$$\text{Accounts receivable turnover ratio} = \frac{\text{Net credit sales}}{\text{Average net accounts receivables}}$$

$$\text{2018:} \quad \frac{\$40{,}600}{[(\$7{,}500 + \$5{,}200) / 2]}$$

$$\frac{\$40{,}600}{\$6{,}350} = 6.394$$

$$\text{Days' Sales in Receivables} = \frac{\text{365 days}}{\text{Accounts receivable turnover ratio}}$$

$$\text{2018:} \quad \frac{\text{365 days}}{6.394} = \text{57 days}$$

Requirement 3
Accel's Companies' have a high amount of inventory on hand and a low inventory turnover ratio. This could be an area to look at and compare to the prior year and industry average. They have a high gross profit percentage, which is a good indicator. The amount of time it takes to collect receivables seems high, but this would depend on the credit terms.

S15-8
Requirement 1

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

$$\text{2018:} \quad \frac{\$41{,}900}{\$82{,}800} = 0.506 = 50.6\%$$

$$\text{Debt to equity ratio} = \frac{\text{Total liabilities}}{\text{Total equity}}$$

$$\text{2018:} \quad \frac{\$41{,}900}{\$40{,}900} = 1.02$$

S15-8, cont.
Requirement 2

Accel’s debt ratio and debt to equity ratio are not very high, which indicates it’s in a strong position to pay its liabilities.

S15-9
Requirement 1

$$\text{Profit margin ratio} = \frac{\text{Net income}}{\text{Net sales revenue}}$$

$$\text{2018:} \quad \frac{\$7,300}{\$40,600} = 0.180 = 18.0\%$$

Requirement 2

$$\text{Rate of return on total assets} = \frac{\text{Net income + Interest expense}}{\text{Average total assets}}$$

$$\text{2018:} \quad \frac{(\$7,300 + \$600)}{[(\$82,800 + \$54,200) / 2]}$$

$$\frac{\$7,900}{68,500} = 0.115 = 11.5\%$$

Requirement 3

$$\text{Asset turnover ratio} = \frac{\text{Net sales revenue}}{\text{Average total assets}}$$

$$\text{2018:} \quad \frac{\$40,600}{[(\$82,800 + \$54,200) / 2]}$$

$$\frac{\$40,600}{\$68,500} = 0.593 \text{ times}$$

S15-9, cont.
Requirement 4

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$\text{2018:} \quad \frac{\$7{,}300 - \$0}{[(\$40{,}900 + \$30{,}700) / 2]}$$

$$\frac{\$7{,}300}{\$35{,}800} = 0.204 = 20.4\%$$

Requirement 5
The rates of return are strong. The rate of return on total assets is 11.5% and the rate of return on common stockholder's equity is 20.4%.

S15-10
Requirement 1

$$\text{Earnings per share} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

$$2018: \quad \frac{\$7{,}300 - \$0}{10{,}000 \text{ shares}} = \$0.73 \text{ / share}$$

Requirement 2

$$\text{Price/earnings ratio} = \frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$$

$$2018: \quad \frac{\$12.50 \text{ per share}}{\$0.73 \text{ per share}} = 17.12$$

Requirement 3

Accel's Companies' price /earnings ratio for 2018 of 17.12 means that the company's stock is selling at 17.12 times one year's earnings per share. This is high. The high P/E ratio would possibly make the company a good investment opportunity as the market values the company's stock to be worth 17.12 times its earnings per share.

S15-11

OLD MILLS Income Statement Year Ended December 31, 2018		
Net Sales Revenue	$ 6,900	
Cost of Goods Sold	**2,923**	(a)
Selling and Admin Expenses	1,710	
Interest Expense	**997**	(b)
Other Expenses	120	
Income before Income Taxes	1,150	
Income Tax Expense	**184**	(c)
Net Income	**$ 966**	(d)

a.	=	Average merchandise inventory × Inventory turnover	($810 + $770)/2 × 3.70 = $790 × 3.70 = $2,923
b.	=	Net Sales Revenue – COGS − S & A – Other Expenses – Income before Income Taxes	$6,900 – $2,923 – $1,710 – $120 – $1,150 = $997
d.	=	Profit Margin Ratio × Net Sales Revenue	0.14 × $6,900 = $966
c.	=	Income before Income Taxes – Net Income	$1,150 − $966 = $184

S15-12

	TRADITIONAL MILLS Balance Sheet December 31, 2018		
Assets		**Liabilities**	
Cash	$ 45	Total Current Liabilities	$ 2,500
Accounts Receivable	**(a) 855**	Long-term Note Payable	**(e) 1,290**
Merchandise Inventory	800	Other Long-term Liabilities	760
Prepaid Expenses	**(b) 100**	Total Liabilities	**(f) 4,550**
Total Current Assets	**(c) 1,800**		
Plant Assets, Net	**(d) 2,710**	**Stockholders' Equity**	
Other Assets	2,490	Stockholders' Equity	2,450
Total Assets	$ 7,000	Total Liabilities and Stockholders' Equity	**(g) $7,000**

a.	=	(Acid-test Ratio × Total Current Liabilities) − Cash	(0.36 × $2,500) – $45 = $855
b.	=	Total Current Assets – Cash – Accounts Receivable – Merchandise Inventory	($1,800 – $45 – $855 – $800) = $100
c.	=	Current Ratio × Current Liabilities	0.72 × $2,500 = $1,800
d.	=	Total Assets – Total Current Assets – Other Assets	$7,000 – $1,800 – $2,490 = $2,710
e.	=	Total Liabilities – Other Long-Term Liabilities – Total Current Liabilities	$4,550 – $760 – $2,500 = $1,290
f.	=	Total Liabilities and Stockholders' Equity – Stockholders' Equity	$7,000 – $2,450 = $4,550
g.	=	Total Assets = Total Liabilities and Stockholders' Equity	$7,000

E15-13
Requirement 1

MULBERRY DESIGNS, INC.
Comparative Income Statement
Years Ended December 31, 2018 and 2017

	2018	2017	Amount	Percentage
Net Sales Revenue	$ 431,000	$ 372,350	$ 58,650	15.8 %
Expenses:				
Cost of Goods Sold	203,850	186,000	17,850	9.6
Selling and Administrative Expenses	99,000	93,250	5,750	6.2
Other Expenses	9,000	4,650	4,350	93.5
Total Expenses	311,850	283,900	27,950	9.8
Net Income	$ 119,150	$ 88,450	$ 30,700	34.7 %

Requirement 2
Net income increased by a higher percentage than total net sales revenue during 2018 because revenues increased at a higher rate than total expenses.

E15-14
Requirement 1

	2019	2018	2017	2016	2015
Net revenue	$1,360,000	$1,180,000	$1,147,000	$1,008,000	$1,044,000
Trend percentages	130%	113%	110%	97%	100%
Net income	$127,000	$120,000	$87,000	$75,000	$83,000
Trend percentages	153%	145%	105%	90%	100%

Requirement 2

Net income grew at a faster rate (53%) than net revenue (30%).

E15-15

THETA DESIGNS, INC. Comparative Balance Sheet December 31, 2018 and 2017				
	2018	Percent of Total	2017	Percent of Total
Assets				
Total Current Assets	$ 25,000	12.5 %	$ 73,440	24.0 %
Property, Plant, and Equipment, net	153,600	76.8	168,300	55.0
Other Assets	21,400	10.7	64,260	21.0
Total Assets	$ 200,000	100.0 %	$ 306,000	100.0 %
Liabilities				
Total Current Liabilities	$ 27,600	13.8 %	$ 49,266	16.1 %
Long-term Debt	72,400	36.2	208,998	68.3
Total Liabilities	100,000	50.0	258,264	84.4
Stockholders' Equity				
Total Stockholders' Equity	100,00	50.0	47,736	15.6
Total Liabilities and Stockholders' Equity	$ 200,000	100.0 %	$ 306,000	100.0 %

E15-16
Requirement 1

MULBERRY DESIGNS, INC. Comparative Common-Size Income Statement Years Ended December 31, 2018 and 2017		
	2018	**2017**
Net Sales Revenue	100.0 %	100.0 %
Expenses:		
Cost of Goods Sold	47.3	50.0
Selling and Administrative Expenses	23.0	25.0
Other Expenses	2.1	1.2
Total Expenses	72.4	76.2
Net Income	27.6 %	23.8 %

Requirement 2

An investor would be pleased with the 2018 results. There is a decrease in cost of goods sold and selling and administrative expenses as a percentage of net sales revenue; this causes the net income to be a larger percentage of net sales revenue.

E15-17

	Current Assets	–	Current Liabilities	=	Working Capital	Dollar amount of change	Percentage of Change
2019:	$490,000	–	$235,000	=	$255,000	$95,000	59.4%
2018:	$320,000	–	$160,000	=	$160,000	$45,000	39.1%
2017:	$230,000	–	$115,000	=	$115,000		

Research Enterprises working capital has improved year over year from 2017 to 2019. It is better able to meet its short-term obligations with its current assets.

E15-18

a.	Total current assets / Total current liabilities	$190,000 / $136,000	= 1.40
b.	Cash + Cash equivalents / Total current liabilities	$16,000 + $0 / $136,000	= 0.12
c.	Cash + Short-term investments + Net current receivables / Total current liabilities	$16,000 + $19,000 + $60,000 / $136,000	= 0.70
d.	Cost of goods sold / Average merchandise inventory	$312,000 / ($78,000 + 74,000) / 2	= 4.11 times
e.	365 days / Inventory turnover	365 days / 4.11	= 89 days
f.	Net credit sales / Average net accounts receivables	$476,000 / ($60,000 + $92,000) / 2	= 6.26
	365 days / Accounts receivable turnover ratio	365 days / 6.26	= 58 days
g.	Gross Profit / Net Sales Revenue	($476,000 − $312,000) / $476,000	= 34.5%

E15-19

	2018			2017		
a. $\dfrac{\text{Total current assets}}{\text{Total current liabilities}}$	$\dfrac{\$449{,}000}{\$288{,}000}$	=	1.56	$\dfrac{\$443{,}000}{\$205{,}000}$	=	2.16
b. $\dfrac{\text{Cash + Cash equivalents}}{\text{Total current liabilities}}$	$\dfrac{\$58{,}000 + \$0}{\$288{,}000}$	=	0.20	$\dfrac{\$47{,}000 + \$0}{\$205{,}000}$	=	0.23
c. $\dfrac{\text{Cash + Short-term investments + Net current receivables}}{\text{Total current liabilities}}$	$\dfrac{\$58{,}000 + \$34{,}000 + \$140{,}000}{\$288{,}000}$	=	0.81	$\dfrac{\$47{,}000 + \$0 + \$124{,}000}{\$205{,}000}$	=	0.83
d. $\dfrac{\text{Total liabilities}}{\text{Total assets}}$	$\dfrac{\$288{,}000 + \$40{,}000}{\$530{,}000}$	=	61.9%	$\dfrac{\$205{,}000 + \$50{,}000}{\$565{,}000}$	=	45.1%
e. $\dfrac{\text{Total liabilities}}{\text{Total equity (Total assets – Total liabilities)}}$	$\dfrac{\$288{,}000 + \$40{,}000}{\$530{,}000 - \$328{,}000}$	=	1.62	$\dfrac{\$255{,}000}{\$565{,}000 - \$255{,}000}$	=	0.82

The current ratio and quick ratio are relatively high, so the company appears to have the liquidity to pay these liabilities. The debt to equity ratio and the debt ratio are at average levels, so the company is not overloaded with debt. In comparison to 2017, all the ratios deteriorated in 2018 which reduces the company's ability to pay current liabilities and long-term liabilities.

E15-20
Requirement 1

$$\text{Profit margin ratio} = \frac{\text{Net income}}{\text{Net sales revenue}}$$

$$2019: \quad \frac{\$23{,}500}{\$181{,}000} = 0.130 = 13.0\%$$

$$2018: \quad \frac{\$10{,}500}{\$160{,}000} = 0.066 = 6.6\%$$

E15-20, cont.
Requirement 2

$$\text{Rate of return on total assets} = \frac{\text{Net income + Interest expense}}{\text{Average total assets}}$$

$$2019: \quad \frac{(\$23{,}500 + \$8{,}000)}{[(\$209{,}000 + \$187{,}000) / 2]} = 0.159 = 15.9\%$$

$$2018: \quad \frac{(\$10{,}500 + \$12{,}000)}{[(\$187{,}000 + \$167{,}000) / 2]} = 0.127 = 12.7\%$$

Requirement 3

$$\text{Asset turnover ratio} = \frac{\text{Net sales revenue}}{\text{Average total assets}}$$

$$2019: \quad \frac{\$181{,}000}{[(\$209{,}000 + \$187{,}000) / 2]} = 0.91 \text{ times}$$

$$2018: \quad \frac{\$160{,}000}{[(\$187{,}000 + \$167{,}000) / 2]} = 0.90 \text{ times}$$

Requirement 4

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income – Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$2019: \quad \frac{\$23{,}500 - \$2{,}000}{[(\$96{,}000 + \$91{,}500) / 2]} = 0.229 = 22.9\%$$

$$2018: \quad \frac{\$10{,}500 - \$2{,}000}{[(\$91{,}500 + \$80{,}500) / 2]} = 0.090 = 9.9\%$$

E15-20, cont.
Requirement 5

$$\text{Earnings per share} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

2019: $$\frac{\$23{,}500 - \$2{,}000}{15{,}000 \text{ shares}} = \$1.43 \text{ / share}$$

2018: $$\frac{\$10{,}500 - \$2{,}000}{[(15{,}000 \text{ shares} + 10{,}000 \text{ shares}) / 2]} = \$0.68 \text{ / share}$$

Requirement 6

$$\text{Dividend payout} = \frac{\text{Annual dividend per share}}{\text{Earnings per share}}$$

2019: $$\frac{\$1.13 \text{ per share}}{\$1.43 \text{ per share}} = 0.790 = 79.0\%$$

Requirement 7

The company's performance improved during 2019 based on an improvement in all ratios evaluated.

E15-21

$$\text{Earnings per share} = \frac{\text{Net income – Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

$$\text{2018: } \frac{\$71{,}900 - \$16{,}800}{95{,}000 \text{ shares}} = \$0.58 \text{ / share}$$

$$\text{2017: } \frac{\$64{,}300 - \$16{,}800}{95{,}000 \text{ shares}} = \$0.50 \text{ / share}$$

$$\text{Price/earnings ratio} = \frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$$

$$\text{2018: } \frac{\$16.50 \text{ per share}}{\$0.58 \text{ per share}} = 28.45$$

$$\text{2017: } \frac{\$10.00 \text{ per share}}{\$0.50 \text{ per share}} = 20.00$$

$$\text{Dividend yield} = \frac{\text{Annual dividend per share}}{\text{Market price per share}}$$

$$\text{2018: } \frac{(\$22{,}000 / 95{,}000 \text{ shares}) = \$0.23 \text{ per share}}{\$16.50 \text{ per share}} = 0.014 = 1.4\%$$

$$\text{2017: } \frac{(\$22{,}000 / 95{,}000 \text{ shares}) = \$0.23 \text{ per share}}{\$10.00 \text{ per share}} = 0.023 = 2.3\%$$

$$\text{Dividend payout} = \frac{\text{Annual dividend per share}}{\text{Earnings per share}}$$

$$\text{2018: } \frac{\$0.23 \text{ per share}}{\$0.58 \text{ per share}} = 0.400 = 40.0\%$$

$$\text{2017: } \frac{\$0.23 \text{ per share}}{\$0.50 \text{ per share}} = 0.460 = 46.0\%$$

The stock’s attractiveness increased during 2018, as shown by the increase in the price/earnings ratio. If an investor is looking at the stock for dividend potential, then the stock is less attractive than last year; both the dividend yield and dividend payout decreased.

E15-22

BRIDGET'S SHOPS INC. Balance Sheet December 31, 2018				
Assets			Liabilities	
Total Current Assets		$ 1,216,000	Total Current Liabilities	$ 760,000
Plant Assets	$ 3,584,000		Long-term Liabilities	780,000
Less: Accumulated Depreciation	2,000,000		Total Liabilities	1,540,000
Plant Assets, Net		1,584,000	Stockholders' Equity	1,260,000
Total Assets		$ 2,800,000	Total Liabilities and Stockholder's Equity	$ 2,800,000

Current Liabilities	=	Current Assets / Current Ratio	$1,216,000 / 1.60 = $760,000
Long-term Liabilities	=	Total Liabilities – Current Liabilities	$1,540,000 – $760,000 = $780,000
Total Assets	=	Total Liabilities / Debt Ratio	$1,540,000 / 0.55 = $2,800,000
Plant Assets, Net	=	Total Assets – Total Current Assets	$2,800,000 – $1,216,000 = $1,584,000
Plant Assets	=	Plant Assets, Net + Accumulated Depreciation	$1,584,000 + $2,000,000 = $3,584,000

Problems (Group A)

P15-23A
Requirement 1

	2019	2018	2017	2016
Net Sales Revenue	$766,000	$708,000	$644,000	$664,000
Trend Percentages	115%	107%	97%	100%
Net Income	$60,000	$38,000	$36,000	$44,000
Trend Percentages	136%	86%	82%	100%
Ending Common Stockholder's Equity	$368,000	$352,000	$326,000	$296,000
Trend Percentages	124%	119%	110%	100%

Requirement 2

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$2019: \quad \frac{\$60{,}000 - \$0}{[(\$368{,}000 + \$352{,}000) / 2]} = 0.167 = 16.7\%$$

$$2018: \quad \frac{\$38{,}000 - \$0}{[(\$352{,}000 + \$326{,}000) / 2]} = 0.112 = 11.2\%$$

$$2017: \quad \frac{\$36{,}000 - \$0}{[(\$326{,}000 + \$296{,}000) / 2]} = 0.116 = 11.6\%$$

P15-24A
Requirement 1

KLEIN DEPARTMENT STORES, INC. Income Statement Year Ended December 31, 2018		
		Percent of Total
Net Sales Revenue	$ 778,000	100.0 %
Cost of Goods Sold	524,372	67.4
Gross Profit	253,628	32.6
Operating Expenses	159,490	20.5
Operating Income	94,138	12.1
Other Expenses	6,224	0.8
Net Income	$ 87,914	11.3 %

KLEIN DEPARTMENT STORES, INC. Balance Sheet December 31, 2018		
		Percent of Total
Current Assets	$ 339,000	67.8 %
Plant Assets, Net	130,000	26.0
Intangible Assets, Net	7,000	1.4
Other Assets	24,000	4.8
Total Assets	$ 500,000	100.0 %
Current Liabilities	$ 232,000	46.4 %
Long-term Liabilities	111,000	22.2
Total Liabilities	343,000	68.6
Stockholders' Equity	157,000	31.4
Total Liabilities and Stockholders' Equity	$ 500,000	100.0 %

Requirement 2

Klein's gross profit percentage and profit margin ratio are both less than the industry average, which indicates an unfavorable profit performance as compared with industry. Klein has a slightly higher investment in plant and intangible assets than the industry average. The company's percentage of debt to total assets is slightly higher than the industry, which would generally indicate a weaker financial position than the average for the industry.

P15-25A
Requirement 1

KLEIN DEPARTMENT STORES, INC. Common-Size Income Statement Year Ended December 31, 2018		
	Klein Average	Industry Average
Net Sales Revenue	100.0%	100.0%
Cost of Goods Sold	67.4	65.8
Gross Profit	32.6	34.2
Operating Expenses	20.5	19.7
Operating Income	12.1	14.5
Other Expenses	0.8	0.4
Net Income	11.3%	14.1%

KLEIN DEPARTMENT STORES, INC. Common-Size Balance Sheet December 31, 2018		
	Klein Average	Industry Average
Current Assets	67.8%	70.9%
Property, Plant, and Equipment, Net	26.0	23.6
Intangible Assets, Net	1.4	0.8
Other Assets	4.8	4.7
Total Assets	100.0%	100.0%
Current Liabilities	46.4%	48.1%
Long-term Liabilities	22.2	16.6
Total Liabilities	68.6	64.7
Stockholders' Equity	31.4	35.3
Total Liabilities and Stockholders' Equity	100.0%	100.0%

Requirement 2

	Klein	Industry
Gross Profit Percentage	$253,628 / $778,000 = 32.6%	34.2%
Profit Margin Ratio	$87,914 / $778,000 = 11.3%	14.1%

Klein's gross profit percentage and profit margin ratio are both less than the industry average.

P15-25A, cont.
Requirement 3

	Klein	Industry
Current Ratio	$339,000 / $232,000 = 1.46	1.47
Debt to Equity	$343,000 / $157,000 = 2.18	1.83

Klein's current ratio is close to the industry average, but the debt to equity ratio is worse. Klein has more debt relative to equity when compared to the industry average.

P15-26A
Requirement 1

Current Assets:		Current Liabilities:	
Cash	$ 23,000	Accounts Payable	$ 99,000
Accounts Receivable	81,000	Accrued Liabilities	37,000
Merchandise Inventory	185,000	Short-Term Notes Payable	51,000
Total Current Assets	$ 289,000	Total Current Liabilities	187,000
		Long-Term Liabilities	224,000
		Total Liabilities	$ 411,000

Current Ratio	Debt Ratio	Earnings per Share
$289,000 / $187,000 = 1.55	$411,000 / $635,000 = 0.65	$68,000 / 20,000 = $3.40

Requirement 2

	Current Ratio	Debt Ratio	Earnings per Share
a.	($289,000 + 49,000) / ($187,000 + 49,000) = 1.43	($411,000 + 49,000) / ($635,000 + 49,000) = 0.67	$68,000 / 20,000 = $3.40
b.	($289,000 + 127,000) / $187,000 = 2.22	($411,000 + 127,000) / ($635,000 + 127,000) = 0.71	$68,000 / 20,000 = $3.40
c.	($289,000 + 107,000) / $187,000 = 2.12	$411,000 / ($635,000 + 107,000) = 0.55	$68,000 / (20,000 + 2,000) = $3.09
d.	$289,000 / $187,000 = 1.55	$411,000 / $635,000 = 0.65	$68,000 / 20,000 = $3.40

P15-27A
Requirement 1

		2018			2017		
a.	Total current assets / Total current liabilities	$365,000 / $222,000	=	1.64	$383,000 / $244,000	=	1.57
b.	Cash + Cash equivalents / Total current liabilities	$99,000 + $0 / $222,000	=	0.45	$97,000 + $0 / $244,000	=	0.40
c.	Net income + Income tax expense + Interest expense / Interest expense	$65,000 + $18,000 + $8,000 / $8,000	=	11.38	$50,000 + $22,000 + 12,000 / $12,000	=	7.00
d.	Cost of Goods Sold / Average Merchandise Inventory	$236,000 / ($142,000 + $164,000) / 2	=	1.54	$213,000 / ($164,000 + 207,000) / 2	=	1.15
e.	Gross Profit / Net Sales Revenue	$226,000 / $462,000	=	48.9%	$217,000 / $430,000	=	50.5%
f.	Total Liabilities / Total Equity	$335,000 / $245,000	=	1.37	$336,000 / $224,000	=	1.50
g.	Net income – Preferred dividends / Average Common Stockholder's Equity	$65,000 – (4% × $92,000) / ($153,000 + $132,000) / 2	=	43.0%	$50,000 – (4% × $92,000) / ($132,000 + $85,000) / 2	=	42.7%
h.	Net income – Preferred dividends / Weighted average number of common shares outstanding	$65,000 – $3,680 / (16,000 + 15,000) / 2	=	$3.96	$50,000 – $3,680 / 15,000	=	$3.09
i.	Market Price per share of common stock / Earnings Per Share	$51.48 / $3.96	=	13.0	$37.08 / $3.09	=	12.0

Requirement 2

a. Sanfield is in a better position to pay debt in 2018 than in 2017. The current ratio, cash ratio, and times-interest-earned ratio all improved. The inventory turnover improved, so there was an increase in the company's ability to sell inventory.
b. The attractiveness of Sanfield's stock has improved in 2018. The rate of return on common stockholder's equity increased as well as the earnings per share and price/earnings ratio.

P15-28A
Requirement 1

		Digitalized, Corp.			Every Zone, Inc.		
a.	Cash + Cash equivalents + Short-term Investments + Accounts Receivable / Total current liabilities	($24,000 + $0 + $40,000 + $40,000) / $105,000	=	0.99	($17,000 + $0 + $14,000 + $48,000) / $96,000	=	0.82
b.	Cost of Goods Sold / Average Merchandise Inventory	$210,000 / ($66,000 + $81,000) / 2	=	2.86	$260,000 / ($97,000 + $87,000) / 2	=	2.83
c.	365 / Net Credit Sales / (Average net Accounts Receivable)	365 / $423,035 / [($40,000 + $41,000) / 2]	=	35 days	365 / $ 493,845 / [($48,000 + $54,000) / 2]	=	38 days
d.	Total Liabilities / Total Assets	$105,000 / $266,000	=	39.5%	$128,000 / $323,000	=	39.6%
e.	Net income – Preferred dividends / Weighted average number of common shares outstanding	$51,000 − $0 / 12,000 shares	=	$4.25	$72,000 − 0 / 17,000 shares	=	$4.24
f.	Market Price per share of common stock / Earnings Per Share	$76.50 / $4.25	=	18	$114.48 / $4.24	=	27
g.	Annual Dividend per share / Earnings Per Share	$1.10 / $4.25	=	26%	$1.00 / $4.24	=	24%

Requirement 2

Digitalized would be the better investment based on the strategy of a low price earnings ratio, with financial strength. Digitalized's price earnings ratio is only 18, compared to 27 for Every Zone. Digitalized is earning more per share and paying out a higher dividend percentage. Digitalized has better ratios than Every Zone for all the ratios examined.

P15-29A
Requirement 1

	2018	2017	2016	2015	2014
Net Sales Revenue	$250,000	$216,000	$191,000	$161,000	$134,000
Trend Percentages	187%	161%	143%	120%	100.0%
Net Income	$16,225	$11,803	$7,979	$4,760	$3,054
Trend Percentages	531%	386%	261%	156%	100.0%

Analysis: Trends in net sales revenue and net income are both upward, which is positive.

Requirement 2

Profit margin ratio: Net income / Net sales revenue

	2018	2017	2016	2015	2014
Net income	$16,225	$11,803	$7,979	$4,760	$3,054
Net sales	$250,000	$216,000	$191,000	$161,000	$134,000
Profit margin ratio	6.5%	5.5%	4.2%	3.0%	2.3%

Rate of return on total assets: (Net income + Interest expense) / Average total assets

	2018	2017	2016	2015	2014
Given in data	17.2%	14.4%	11.2%	8.1%	7.1%

Asset turnover ratio: Net sales revenue / Average total assets

	2018	2017	2016	2015
Net sales revenue	$250,000	$216,000	$191,000	$161,000
Total assets, beginning	$95,000	$88,400	$78,500	$64,600
Total assets, ending	$106,600	$95,000	$88,400	$78,500
Average total assets	$100,500	$91,700	$83,450	$71,550

	2018	2017	2016	2015
Asset turnover ratio	2.48	2.36	2.29	2.25

P15-29A, cont.
Requirement 2, cont.

Rate of return on common stockholders' equity: (Net income – Preferred dividends) / Average common stockholders' equity

	2018	2017	2016	2015	2014
Given in data	33.5%	26.8%	20.8%	13.5%	13.0%

Earnings per share: (Net income – Preferred dividends) / Weighted average number of common shares outstanding

	2018	2017	2016	2015	2014
Given in data	$1.60	$1.30	$1.20	$1.00	$0.78

Analysis: The profit margin ratio, return on assets, asset turnover ratio, and return on equity are increasing over the five years examined. The return on assets and the return on equity are both very respectful. The earnings per share is increasing over time so the stock is attractive.

Requirement 3

Gross profit percentage: Gross profit / Net sales revenue

	2018	2017	2016	2015	2014
Net sales revenue	$ 250,000	$ 216,000	$ 191,000	$ 161,000	$ 134,000
Cost of goods sold	189,250	164,592	148,216	126,385	106,396
Gross profit	$ 60,750	$ 51,408	$ 42,784	$ 34,615	$ 27,604
Gross profit %	24.3%	23.8%	22.4%	21.5%	20.6%

Inventory Turnover: Cost of goods sold / Average merchandise inventory

Days' sales in inventory: 365 days / Inventory turnover

	2018	2017	2016	2015	2014
Beginning inventory	$ 22,600	$ 21,700	$ 19,000	$ 17,500	$ 16,700
Ending inventory	24,500	22,600	21,700	19,000	17,500
Average inventory	$ 23,550	$ 22,150	$ 20,350	$ 18,250	$ 17,100
Inventory turnover	8.04	7.43	7.28	6.93	6.22
Days' sales in inventory	45.4 days	49.1 days	50.1 days	52.7 days	58.7 days

Analysis: The gross profit percentage is around 24% and has been increasing, which is a positive sign. Inventory turnover has increased over the period examined, which is a positive sign. The company is selling inventory more rapidly.

P15-29A, cont.
Requirement 4

Acid-test ratio: (Cash + Cash equivalents + Short-term investments + Net current receivables) / Current liabilities

	2018	2017	2016	2015	2014
Given in data	1.0	1.0	0.9	1.0	1.3

Current ratio: Current assets / Current liabilities

	2018	2017	2016	2015	2014
Current assets	$30,700 + $24,500	$27,200 + $22,600	$26,700 + $21,700	$24,400 + $19,000	$21,500 + $17,500
Current liabilities	$32,300	$28,000	$28,300	$25,000	$16,500
Current ratio	1.71	1.78	1.71	1.74	2.36

Debt ratio: Total liabilities / Total assets

	2018	2017	2016	2015	2014
Total liabilities	$32,300 + $23,000	$28,000 + $21,500	$28,300 + $17,600	$25,000 + $19,100	$16,500 + $12,000
Total assets	$106,600	$95,000	$88,400	$78,500	$64,600
Debt ratio	51.9%	52.1%	51.9%	56.2%	44.1%

Debt to equity ratio: Total liabilities / Total equity

	2018	2017	2016	2015	2014
Total liabilities	$32,300 + $23,000	$28,000 + $21,500	$28,300 + $17,600	$25,000 + $19,100	$16,500 + $12,000
Total equity	$51,300	$45,500	$42,500	$34,400	$36,100
Debt to equity ratio	1.08	1.09	1.08	1.28	0.79

P15-29A, cont.
Requirement 4, cont.

Times interest earned ratio: (Net income + income tax expense + Interest expense) / Interest expense

	2018	2017	2016	2015	2014
Net income	$ 16,225	$ 11,803	$ 7,979	$ 4,760	$ 3,054
Income tax expense	4,470	3,900	3,700	3,320	2,700
Interest expense	1,080	1,380	1,400	1,020	830
Total	$ 21,775	$ 17,083	$ 13,079	$ 9,100	$ 6,584
Times-interest-earned ratio	20.16	12.38	9.34	8.92	7.93

Analysis: The current and quick ratios are fairly high. This indicates that the company can pay its liabilities. The company's debt to total assets is not extraordinarily high, which will facilitate the company making all payments for debt. The times-interest-earned ratio has increased from 2014 to 2018 which is favorable.

Requirement 5

Dividend payout: Annual dividend per share / Earnings per share

	2018	2017	2016	2015	2014
Annual dividend per share (given in data)	$0.40	$0.38	$0.34	$0.30	$0.26
Earnings per share (given in data)	$1.60	$1.30	$1.20	$1.00	$0.78
Dividend payout	25%	29%	28%	30%	33%

Analysis: The dividends per share and earnings per share ratios are both increasing over time. These are probably the two most watched financial measures, so the stock is attractive.

Requirement 6
Final analysis:

ABC's trend of net sales revenue, net income, inventory turnover, earnings per share, and times-interest-earned has improved. All other measures have held steady or improved. There are no apparent trouble spots in ABC's data. Therefore, invest in ABC for increasing dividends per share and steady growth.

Problems (Group B)

P15-30B
Requirement 1

	2019	2018	2017	2016
Net Sales Revenue	$758,000	$701,000	$639,000	$659,000
Trend Percentages	115%	106%	97%	100%
Net Income	$59,000	$40,000	$39,000	$42,000
Trend Percentages	140%	95%	93%	100%
Ending Common Stockholder's Equity	$360,000	$346,000	$324,000	$302,000
Trend Percentages	119%	115%	107%	100%

Requirement 2

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$2019: \quad \frac{\$59{,}000 - \$0}{[(\$360{,}000 + \$346{,}000) / 2]} = 0.167 = 16.7\%$$

$$2018: \quad \frac{\$40{,}000 - \$0}{[(\$346{,}000 + \$324{,}000) / 2]} = 0.119 = 11.9\%$$

$$2017: \quad \frac{\$39{,}000 - \$0}{[(\$324{,}000 + \$302{,}000) / 2]} = 0.125 = 12.5\%$$

P15-31B
Requirement 1

RANDALL DEPARTMENT STORES, INC.
Income Statement
Year Ended December 31, 2018

		Percent of Total
Net Sales Revenue	$ 783,000	100 %
Cost of Goods Sold	527,742	67.4
Gross Profit	255,258	32.6
Operating Expenses	163,647	20.9
Operating Income	91,611	11.7
Other Expenses	6,264	0.8
Net Income	$ 85,347	10.9 %

P15-31B, cont.
Requirement 1, cont.

RANDALL DEPARTMENT STORES, INC.
Balance Sheet
December 31, 2018

		Percent of Total
Current Assets	$ 310,040	67.4 %
Property, Plant, and Equipment, Net	119,600	26.0
Intangible Assets, Net	7,360	1.6
Other Assets	23,000	5.0
Total Assets	$ 460,000	100.0 %
Current Liabilities	$ 210,680	45.8 %
Long-term Liabilities	103,960	22.6
Total Liabilities	314,640	68.4
Stockholders' Equity	145,360	31.6
Total Liabilities and Stockholders' Equity	$460,000	100.0 %

Requirement 2

Randall's gross profit percentage and profit margin ratio are both less than the industry average, which indicates an unfavorable profit performance as compared with the industry. They have a slightly higher investment in plant and intangible assets than the industry average. The percentage of debt to total assets is higher than the industry average, which would generally indicate a weaker financial position than that of the average for the industry.

P15-32B
Requirement 1

RANDALL DEPARTMENT STORES, INC.
Common-Size Income Statement
Year Ended December 31, 2018

	Randall Average	Industry Average
Net Sales Revenue	100.0%	100.0%
Cost of Goods Sold	67.4	65.8
Gross Profit	32.6	34.2
Operating Expenses	20.9	19.7
Operating Income	11.7	14.5
Other Expenses	0.8	0.4
Net Income	10.9%	14.1%

P15-32B, cont.
Requirement 1, cont.

RANDALL DEPARTMENT STORES, INC.
Common-Size Balance Sheet
December 31, 2018

	Randall Average	Industry Average
Current Assets	67.4%	70.9%
Property, Plant, and Equipment, Net	26.0	23.6
Intangible Assets, Net	1.6	0.8
Other Assets	5.0	4.7
Total Assets	100.0%	100.0%
Current Liabilities	45.8%	48.1%
Long-term Liabilities	22.6	16.6
Total Liabilities	68.4	64.7
Stockholders' Equity	31.6	35.3
Total Liabilities and Stockholders' Equity	100.0%	100.0%

Requirement 2

	Randall	Industry
Gross Profit Percentage	$255,258 / $783,000 = 32.6%	34.2%
Profit Margin Ratio	$85,347 / $783,000 = 10.9%	14.1%

Randall's gross profit percentage and profit margin ratio are both less than the industry average.

Requirement 3

	Randall	Industry
Current Ratio	$310,040 / $210,680 = 1.47	1.47
Debt to Equity	$314,640 / $145,360 = 2.16	1.83

Randall's current ratio is the same as the industry average, but the debt to equity ratio is worse.

P15-33B
Requirement 1

Current Assets:		Current Liabilities:	
Cash	$ 19,000	Accounts Payable	$102,000
Accounts Receivable	82,000	Accrued Liabilities	35,000
Merchandise Inventory	183,000	Short-Term Notes Payable	50,000
Total Current Assets	$ 284,000	Total Current Liabilities	187,000
		Long-Term Liabilities	221,000
		Total Liabilities	$ 408,000

Current Ratio	Debt Ratio	Earnings per Share
$284,000 / $187,000 = 1.52	$408,000 / $638,000 = 0.64	$69,000 / 50,000 shares = $1.38

Requirement 2

	Current Ratio	Debt Ratio	Earnings per Share
a.	($284,000 + $42,000) / ($187,000 + $42,000) = 1.42	($408,000 + $42,000) / ($638,000 + $42,000) = 0.66	$69,000 / 50,000 shares = $1.38
b.	($284,000 + $121,000) / $187,000 = 2.17	($408,000 + $121,000) / ($638,000 + $121,000) = 0.70	$69,000 / 50,000 shares= $1.38
c.	($284,000 + $103,000) / $187,000 = 2.07	$408,000/ ($638,000 + $103,000) = 0.55	$69,000 / (50,000 + 5,000 shares) = $1.25
d.	$284,000 / $187,000 = 1.52	$408,000 / $638,000 = 0.64	$69,000 / 50,000 shares = $1.38

P15-34B
Requirement 1

		2018			2017		
a.	Total current assets / Total current liabilities	$373,000 / $227,000	=	1.64	$385,000 / $246,000	=	1.57
b.	Cash + Cash equivalents / Total current liabilities	$99,000 + $0 / $227,000	=	0.44	$98,000 + $0 / $246,000	=	0.40
c.	Net income + Income tax expense + Interest expense / Interest expense	$56,000 + $18,000 +$9,000 / $9,000	=	9.22	$41,000 + $24,000 + $13,000 / $13,000	=	6.00
d.	Cost of Goods Sold / Average Merchandise Inventory	$241,000 / ($146,000 + $164,000) / 2	=	1.55	$211,000 / ($164,000 + $202,000) / 2	=	1.15
e.	Gross Profit / Net Sales Revenue	$220,000 / $461,000	=	47.7%	$213,000 / $424,000	=	50.2%
f.	Total Liabilities / Total Equity	$344,000 / $240,000	=	1.43	$346,000 / $220,000	=	1.57
g.	Net income – Preferred dividends / Average Common Stockholder's Equity	$56,000 – (3% × $98,000) / ($142,000 + $122,000) / 2	=	40.2%	$41,000 – (3% × $98,000) / ($122,000 + $89,000) / 2	=	36.1%
h.	Net income – Preferred dividends / Weighted average number of common shares outstanding	$56,000 – $2,940 / (14,000 + 12,000) / 2	=	$4.08	$41,000 – $2,940 / 12,000	=	$3.17
i.	Market Price per share of common stock / Earnings Per Share	$69.36 / $4.08	=	17	$38.04 / $3.17	=	12

Requirement 2

a. Garfield is in a better position to pay debt in 2018 than in 2017. The current ratio, cash ratio, and times-interest-earned ratio all improved. The inventory turnover improved, so their ability to sell inventory improved.

b. The attractiveness of Garfield's stock has improved in 2018. The rate of return on common stockholder's equity increased as well as the earnings per share and price/earnings ratio.

P15-35B
Requirement 1

		All Digital			Green Zone		
a.	Cash + Cash equivalents + Short-term Investments + Accounts Receivable / Total current liabilities	($23,000 + $0 + $37,000 + $39,000) / $105,000	=	0.94	($18,000 + $0 + $17,000 + $49,000) / $99,000	=	0.85
b.	Cost of Goods Sold / Average Merchandise Inventory	$209,000 / ($64,000 + $81,000) / 2	=	2.88	$258,000 / ($102,000 + $89,000) / 2	=	2.70
c.	365 / Net Credit Sales / (Average net Accounts Receivable)	365 / $417,925 / [($39,000 + $41,000) / 2]	=	35 days	365 / $ 493,115 / [($49,000 + $54,000) / 2]	=	38 days
d.	Total Liabilities / Total Assets	$105,000 / $263,000	=	39.9%	$134,000 / $326,000	=	41.1%
e.	Net income – Preferred dividends / Weighted average number of common shares outstanding	$58,000 − $0 / 10,000 shares	=	$5.80	$72,000 − $0 / 14,000 shares	=	$5.14
f.	Market Price per share of common stock / Earnings Per Share	$92.80 / $5.80	=	16	$128.50 / $5.14	=	25
g.	Annual Dividend per share / Earnings Per Share	$1.20 / $5.80	=	21%	$0.90 / $5.14	=	18%

Requirement 2

All Digital would be the better investment based on the strategy of a low price earnings ratio, with financial strength. All Digital's price earnings ratio is only 16 compared to 25 for Green Zone, and All Digital's acid-test ratio, inventory turnover, and days' sales in receivables are better than Green Zone. On all of the ratios, All Digital looks better than Green Zone.

P15-36B
Requirement 1

	2018	2017	2016	2015	2014
Net Sales Revenue	$275,000	$222,000	$199,000	$171,000	$131,000
Trend Percentages	210%	169%	152%	131%	100.0%
Net Income	$21,735	$12,939	$9,488	$6,755	$2,497
Trend Percentages	870%	518%	380%	271%	100.0%

Analysis: Trends in net sales revenue and net income are both upward, which is positive.

Requirement 2

Profit margin ratio: Net income / Net sales revenue

	2018	2017	2016	2015	2014
Net income	$21,735	$12,939	$9,488	$6,755	$2,497
Net sales revenue	$275,000	$222,000	$199,000	$171,000	$131,000
Profit margin ratio	7.9%	5.8%	4.8%	4.0%	1.9%

Rate of return on total assets: (Net income + Interest expense) / Average total assets

	2018	2017	2016	2015	2014
Given in data	22.5%	15.5%	12.8%	10.9%	9.9%

Asset turnover ratio: Net sales revenue / Average total assets

	2018	2017	2016	2015
Net sales revenue	$275,000	$222,000	$199,000	$171,000
Total assets, beginning	$95,800	$88,900	$79,700	$64,000
Total assets, ending	$107,200	$95,800	$88,900	$79,700
Average total assets	$101,500	$92,350	$84,300	$71,850

	2018	2017	2016	2015
Asset turnover ratio	2.71	2.40	2.36	2.38

P15-36B, cont.
Requirement 2, cont.

Rate of return on common stockholders' equity: (Net income – Preferred dividends) / Average common stockholders' equity

	2018	2017	2016	2015	2014
Given in data	44.2%	28.7%	24.1%	19.4%	18.9%

Earnings per share: (Net income – Preferred dividends) / Weighted average number of common shares outstanding

	2018	2017	2016	2015	2014
Given in data	$1.10	$0.80	$0.70	$0.50	$0.28

Analysis: The profit margin ratio, return on assets, asset turnover ratio, and return on equity are increasing over the five years examined. The return on assets and the return on equity are both very respectful. The earnings per share is increasing over time so the stock is attractive.

Requirement 3

Gross profit percentage: Gross profit / Net sales revenue

	2018	2017	2016	2015	2014
Net sales revenue	$ 275,000	$ 222,000	$ 199,000	$ 171,000	$ 131,000
Cost of goods sold	208,725	169,386	154,822	134,235	103,883
Gross profit	$ 66,275	$ 52,614	$ 44,178	$ 36,765	$ 27,117
Gross profit %	24.1%	23.7%	22.2%	21.5%	20.7%

Inventory Turnover: Cost of goods sold / Average merchandise inventory

Days' sales in inventory: 365 days / Inventory turnover

	2018	2017	2016	2015	2014
Beginning inventory	$ 22,400	$ 21,600	$ 19,300	$ 17,000	$ 16,800
Ending inventory	24,700	22,400	21,600	19,300	17,000
Average inventory	$ 23,550	$ 22,000	$ 20,450	$ 18,150	$ 16,900
Inventory turnover	8.86	7.70	7.57	7.40	6.15
Days' sales in inventory	41.2 days	47.4 days	48.2 days	49.3 days	59.3 days

Analysis: The gross profit percentage is around 24% and has been increasing, which is a positive sign. Inventory turnover has increased over the period examined, which is a positive sign. The company is selling inventory more rapidly.

P15-36B, cont.
Requirement 4

Acid-test ratio: (Cash + Cash equivalents + Short-term investments + Net current receivables) / Current liabilities

	2018	2017	2016	2015	2014
Given in data	0.9	1.0	0.9	1.0	1.3

Current ratio: Current assets / Current liabilities

	2018	2017	2016	2015	2014
Current assets	\$30,900 + \$24,700	\$27,200 + \$22,400	\$26,800 + \$21,600	\$24,400 + \$19,300	\$21,800 + \$17,000
Current liabilities	\$32,600	\$27,800	\$28,800	\$25,600	\$17,000
Current ratio	1.71	1.78	1.68	1.71	2.28

Debt ratio: Total liabilities / Total assets

	2018	2017	2016	2015	2014
Total liabilities	\$32,600 + \$23,000	\$27,800 + \$21,200	\$28,800 + \$16,800	\$25,600 + \$18,600	\$17,000 + \$12,900
Total assets	\$107,200	\$95,800	\$88,900	\$79,700	\$64,000
Debt ratio	51.9%	51.1%	51.3%	55.5%	46.7%

Debt to equity ratio: Total liabilities / Total equity

	2018	2017	2016	2015	2014
Total liabilities	\$32,600 + \$23,000	\$27,800 + \$21,200	\$28,800 + \$16,800	\$25,600 + \$18,600	\$17,000 + \$12,900
Total equity	\$51,600	\$46,800	\$43,300	\$34,500	\$34,100
Debt to equity ratio	1.08	1.05	1.05	1.28	0.88

P15-36B, cont.
Requirement 4, cont.

Times interest earned ratio: (Net income + income tax expense + Interest expense) / Interest expense

	2018	2017	2016	2015	2014
Net income	$ 21,735	$ 12,939	$ 9,488	$ 6,755	$ 2,497
Income tax expense	4,420	3,900	3,610	3,390	2,730
Interest expense	1,070	1,370	1,330	1,100	800
Total	$ 27,225	$ 18,209	$ 14,428	$ 11,245	$ 6,027
Times-interest-earned ratio	25.44	13.29	10.85	10.22	7.53

Analysis: The current and quick ratios are fairly high. This indicates that the company can pay its liabilities. The company's debt to total assets is not extraordinarily high, which will facilitate the company making all payments for debt. The times-interest-earned ratio has increased from 2014 to 2018 which is favorable.

Requirement 5

Dividend payout: Annual dividend per share / Earnings per share

	2018	2017	2016	2015	2014
Annual dividend per share (given in data)	$0.45	$0.43	$0.39	$0.35	$0.31
Earnings per share (given in data)	$1.10	$0.80	$0.70	$0.50	$0.28
Dividend payout	41%	54%	56%	70%	111%

Analysis: The dividends per share and earnings per share ratios are both increasing over time. These are probably the two most watched financial measures, so the stock is attractive. However, dividend payout is decreasing, which is unfavorable.

Requirement 6
Final analysis:

XYZ's trend of net sales revenue, net income, inventory turnover, earnings per share, and times-interest-earned has improved. All other measures have held steady or improved. There are no apparent trouble spots in XYZ's data. Therefore, invest in XYZ for increasing dividends per share and steady growth.

Excel Skill Problem

P15-37

The student templates for *Using Excel* are available online in MyAccountingLab in the Multimedia Library or at http://www.pearsonhighered.com/Horngren. The solution to *Using Excel* is available online in MyAccountingLab in the Instructor Resource Center or at http://www.pearsonhighered.com/Horngren.

Continuing Problem

P15-38

Requirement 1

Ratio	Formula		Result
a. Current ratio	Total current assets / Total current liabilities		
PC – 2019	$209,370 / $69,554	=	3.01
PC – 2018	$197,850 / $60,232	=	3.28
RLV – 2019	$198,490 / $90,810	=	2.19
RLV – 2018	$196,780 / $90,010	=	2.19
b. Cash ratio	(Cash + Cash equivalents) / Total current liabilities		
PC – 2019	$69,159 / $69,554	=	0.99
PC – 2018	$70,793 / $60,232	=	1.18
RLV – 2019	$65,730 / $90,810	=	0.72
RLV – 2018	$55,270 / $90,010	=	0.61
c. Inventory turnover	Cost of goods sold / Average merchandise inventory		
PC – 2019	$258,756 / (($79,919 + $66,341) / 2)	=	3.54
PC – 2018	$256,797 / (($66,341 + $76,363) / 2)	=	3.60
RLV – 2019	$299,110 / (($68,500 + $65,230) / 2)	=	4.47
RLV – 2018	$280,190 / (($65,230 + $59,930) / 2)	=	4.48
d. Accounts receivable turnover	Net credit sales / Average net accounts receivable		
PC – 2019	$430,489 / (($44,798 + $44,452) / 2)	=	9.65
PC – 2018	$425,410 / (($44,452 + $44,104) / 2)	=	9.61
RLV – 2019	$410,570 / (($39,810 + $38,650) / 2)	=	10.47
RLV – 2018	$383,870 / (($38,650 + $36,460) / 2)	=	10.22
e. Gross profit percentage	Gross profit / Net sales revenue		
PC – 2019	$171,733 / $430,489	=	39.89%
PC – 2018	$168,613 / $425,410	=	39.64%
RLV – 2019	$111,460 / $410,570	=	27.15%
RLV – 2018	$103,680 / $383,870	=	27.01%
f. Debt ratio	Total liabilities / Total assets		
PC – 2019	$101,236 / $299,204	=	33.84%
PC – 2018	$90,168 / $288,626	=	31.24%
RLV – 2019	$187,120 / $315,250	=	59.36%
RLV – 2018	$195,900 / $313,050	=	62.58%

P15-38, cont.
Requirement 1, cont.

Ratio	Formula		Result
g. Debt to equity ratio	Total liabilities / Total equity		
PC – 2019	$101,236 / $197,968	=	0.51
PC – 2018	$90,168 / $198,458	=	0.45
RLV – 2019	$187,120 / $128,130	=	1.46
RLV – 2018	$195,900 / $117,150	=	1.67
h. Profit margin ratio	Net income / Net sales revenue		
PC – 2019	$11,851 / $430,489	=	2.75%
PC – 2018	$11,094 / $425,410	=	2.61%
RLV – 2019	$21,610 / $410,570	=	5.26%
RLV – 2018	$21,240 / $383,870	=	5.53%
i. Asset turnover ratio	Net sales revenue / Average total assets		
PC – 2019	$430,489 / (($299,204 + $288,626) / 2)	=	1.46
PC – 2018	$425,410 / (($288,626 + $276,482) / 2)	=	1.51
RLV – 2019	$410,570 / (($315,250 + $313,050) / 2)	=	1.31
RLV – 2018	$383,870 / (($313,050 + $310,640) / 2)	=	1.23
j. Rate of return on common stockholders' equity	(Net income – Preferred dividends) / Average common stockholders' equity		
PC – 2019	($11,851 – $0) / (($197,968 + $198,458) / 2)	=	5.98%
PC – 2018	($11,094 – $0) / (($198,458 + $197,668) / 2)	=	5.60%
RLV – 2019	($21,610 – $0) / (($128,130 + $117,150) / 2)	=	17.62%
RLV – 2018	($21,240 – $0) / (($117,150 + $103,840) / 2)	=	19.22%
k. Earnings per share	(Net income – Preferred dividends) / Weighted average number of common shares outstanding		
PC – 2019	($11,851 – $0) / 9,000 shares	=	$1.32
PC – 2018	($11,094 – $0) / 8,000 shares	=	$1.39
RLV – 2019	($21,610 – $0) / 9,000 shares	=	$2.40
RLV – 2018	($21,240 – $0) / 8,000 shares	=	$2.66
l. Price/earnings ratio	Market price per share of common stock / Earnings per share		
PC – 2019	$21.38 / $1.32	=	16.20
PC – 2018	$33.82 / $1.39	=	24.33
RLV – 2019	$46.37 / $2.40	=	19.32
RLV – 2018	$51.64 / $2.66	=	19.41

P15-38, cont.
Requirement 1, cont.

Ratio	Formula		Result
m. Dividend yield	Annual dividend per share / Market price per share		
PC – 2019	\$0.32 / \$21.38	=	1.50%
PC – 2018	\$0.30 / \$33.82	=	0.89%
RLV – 2019	\$0.53 / \$46.37	=	1.14%
RLV – 2018	\$0.45 / \$51.64	=	0.87%

n. Dividend payout	Annual dividend per share / Earnings per share		
PC – 2019	\$0.32 / \$1.32	=	24.24%
PC – 2018	\$0.30 / \$1.39	=	21.58%
RLV – 2019	\$0.53 / \$2.40	=	22.08%
RLV – 2018	\$0.45 / \$2.66	=	16.92%

Requirement 2

Analysis:

Ability to pay current liabilities:

The Paddle Company has higher current ratios and cash ratios, indicating it is better able to pay current liabilities.

Ability to sell merchandise and collect receivables:

Recreational Life Vests has higher inventory and accounts receivable turnovers, indicating it is better able to sell merchandise and collect receivables. However, The Paddle Company has higher gross profit percentages, indicating it is better at earning a gross profit on its merchandise inventory.

Ability to pay long-term debt:

Recreational Life Vests has significantly higher debt and debt to equity ratios, indicating it has higher financial risk. Based on the debt ratio and the debt-to-equity ratio, The Paddle Company would have a higher ability to pay long-term debt.

Profitability:

While The Paddle Company had higher gross profit percentages, Recreational Life Vests has higher profit margin ratios, indicating RLV is better at controlling total costs and earning more net profit on each dollar of sales. The Paddle Company has slightly higher asset turnovers but Recreational Life Vests has significantly higher rates of return on stockholders’ equity and earnings per share.

P15-38, cont.
Requirement 2, cont.

Attractiveness as an investment:
Recreational Life Vests has a stable PE ratio, while The Paddle Company had a significant decrease in PE ratio. The Paddle Company has slightly higher dividend yields and dividend payouts, but both companies are increasing these two ratios.

Conclusion and recommendation:
Overall, both companies appear to be stable, with little fluctuation between the two years. Recreational Life Vests appears to be a greater risk in the long-term due to its higher debt and debt to equity ratios. Since Canyon Canoe Company is looking for a short-term investment in trading securities, it should buy The Paddle Company because it has a higher dividend yield and dividend payout. In the short-term, dividends are the most important factor because they will be Canyon's primary return.

Critical Thinking

Decision Case 15-1
Requirement 1

Recording payments in December, but mailing the checks in January, understates Accounts Payable and Cash at year-end. This action makes the current ratio and the acid-test ratio look better than they really are—so long as the ratio values exceed 1.0. (The reverse is true if those ratios are below 1.0.) The following data illustrate the point:

Assume the cash payments were not made in December			Assumed amount of payment	Reported amounts - assuming the cash payments were recorded		
$\frac{\text{Current assets}}{\text{Current liabilities}}$	$= \frac{\$100}{\$50}$	$= 2.0$	$\frac{\$10}{\$10}$	$= \frac{\$100 - \$10}{\$50 - \$10}$	$= \frac{\$90}{\$40}$	$= 2.25$
$\frac{\text{Quick assets}}{\text{Current liabilities}}$	$= \frac{\$70}{\$50}$	$= 1.4$	$\frac{\$10}{\$10}$	$= \frac{\$70 - \$10}{\$50 - \$10}$	$= \frac{\$60}{\$40}$	$= 1.50$

The debt ratio would also be affected, but to a lesser degree than the current ratio and the acid-test ratio.

Requirement 2

Berkman may want to improve the current ratio because it is the most widely used ratio. Creditors and potential investors will look at that ratio first. By artificially boosting this ratio, it makes his financial position look better than it actually is.

Ethical Issue 15-1
Requirement 1

Reclassifying the long-term investments as short-term will increase current assets and, therefore, increase the current ratio. Whether the company's "true" financial position is stronger is not a clear-cut issue. On one hand, a better current ratio does, indeed, reflect a stronger financial position, as long as the ratio data is legitimate. On the other hand, how an asset is characterized (current or noncurrent) does not affect the underlying fundamentals of the financial position.

Requirement 2
Reclassifying a long-term investment as current to meet a debt agreement does not necessarily brand Ross managers as unethical. The managers may have honestly intended to sell the investments in order to meet obligations. In that case, the managers took appropriate action.

Reclassifying the investments from current back to long-term may suggest to some observers that managers are playing a shell game. However, the case states that sales subsequent to the first reclassification have improved the current ratio. Under these circumstances, Ross may not need to sell the investments. The managers may prefer to hold the investments beyond one year and, therefore, need to reclassify them as long-term. In that case, the managers' action is appropriate.

This case illustrates how gray accounting issues can be. Here the debt agreement depends on the current ratio, which is affected by an asset classification that managers control simply by their intentions. Because the managers' true intentions cannot be ascertained with certainty, it would be hard to prove that the managers are behaving unethically.

Financial Statement Case 15-1
Requirement 1

(In millions)	2015	2014	2013
Sales	$73,785	$72,618	$71,279
Trend percentages	104%	102%	100%
Net earnings / (loss)	$3,363	$(1,636)	$1,971
Trend percentages	171%	(83)%	100%

The sales continue to increase from 2013 to 2015. This continuous increase does not carry to net earnings, though. Target experienced a net loss in 2014. This was due to a substantial loss from discontinued operations. For a better understanding of continuing operations, an analysis of the trend in Net earnings from continuing operations should be done.

Financial Statement Case 15-1, cont.
Requirement 2

TARGET CORPORATION Consolidated Balance Sheet (In millions)				
	Jan. 30, 2016	Percent of Total	Jan. 31, 2015	Percent of Total
Assets:				
Total current assets	$ 14,130	35.1 %	$ 13,624	33.1 %
Property and equipment, net	25,217	62.6	25,952	63.0
Noncurrent assets of discontinued operations	75	0.2	717	1.7
Other noncurrent assets	840	2.1	879	2.1
Total assets	$ 40,262	100.0 %	41,172	100.0 %
Liabilities and shareholders' investment:				
Total current liabilities	$ 12,622	31.3 %	$ 11,736	28.5 %
Total noncurrent liabilities	14,683	36.5	15,439	37.5
Total shareholders' investment	12,957	32.2	13,997	34.0
Total liabilities and shareholders' investment	$ 40,262	100.0 %	$ 41,172	100.0 %

Team Project 15-1 and 15-2

Student responses will vary depending on the companies they select.